CATALOG
1947 - 1948
1948 - 1949

BULLETIN OF
THE STOUT INSTITUTE

MENOMONIE » » » WISCONSIN

ANNUAL CATALOG

GENERAL INFORMATION AND
COURSES OF STUDY FOR THE SCHOOL YEAR

1947-48
1948-49

ENTERED AS SECOND-CLASS MATTER MARCH 10, 1927 AT THE POST OFFICE AT MENOMONIE, WIS., UNDER THE ACT OF AUGUST 12, 1914

THE STOUT INSTITUTE
MENOMONIE, WISCONSIN

COLLEGE CALENDAR

SECOND SEMESTER 1947-48

Monday, January 26, and
Tuesday, January 27, Registration for Second Semester
Wednesday, January 28, Second Semester Classes Convene
Wednesday, March 24, 3:00 p.m., Spring Vacation Begins
Thursday, April 1, Classes Resume
Sunday, May 30, Baccalaureate Address
Friday, June 4, Commencement

SUMMER SESSION 1948

Monday, June 21, Summer Session Begins
Friday, July 30, Summer Session Closes

REGULAR SESSION 1948-49

Monday, September 6, Labor Day
Tuesday, September 7, Freshman Registration
Wednesday, September 8, Registration for Matriculated Students, Freshman Convocation
Thursday, September 9, Registration for Matriculated Students and New Students Other Than Freshmen
Friday, September 10, Classes Convene
Friday, December 17, 3:00 p.m., Christmas Vacation Begins
Monday, January 3, 1949, Classes Resume
Friday, January 21, First Semester Ends
Monday, January 24, and
Tuesday, January 25, Registration for Second Semester
Wednesday, January 26, Second Semester Classes Convene
Wednesday, April 13, 3:00 p.m. Spring Vacation Begins
Thursday, April 21, Classes Resume
Sunday, May 29, Baccalaureate Address
Friday, June 3, Commencement

SUMMER SESSION 1949

Monday, June 20, Summer Session Begins
Friday, July 29, Summer Session Closes

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BOARD OF TRUSTEES

Employee Members	Term Expires
Emil Waldow, Green Bay	1947
Frank C. Horyza, Superior	1947
E. R. Fransway, Wauwautosa	1951
Agricultural Members	
John Wiechers, Racine	1949
John Last, Lake Mills	1949
Robert L. Pierce, Menomonie	1951
Employer Members	
A. A. Laun, Kiel	1947
Fred Vogt, Milwaukee	1949
Jessel S. Whyte, Kenosha	1951

Ex-Officio Members

John Callahan, State Superintendent of Public Instruction, Madison
Voyta Wrabetz, State Industrial Commission, Madison
Clarence Greiber, Director, State Board of Vocational and Adult Education, Madison

Officers of the Board

President - - - - - Jessel S. Whyte, Kenosha
Vice-President - - - - Robert L. Pierce, Menomonie
Secretary - - - - - Lloyd E. Berray, Madison

Stated Meetings of the Board

Regular quarterly meetings of the Board are held on the fourth Monday in March, June, and September, and on the third Monday in December.

FACULTY COMMITTEES

1. **ADMINISTRATIVE COUNCIL:**
   Verne C. Fryklund, Keturah Antrim, Clyde A. Bowman, Bryard Funk, Alice J. Kirk, Gertrude M. O'Brien, Merle M. Price, Ray A. Wigen.
2. **ADMISSION, CREDITS:**
   Clyde A. Bowman, Arthur G. Brown, Alice J. Kirk, Ann Marshall, Ray A. Wigen, Gertrude M. O'Brien, Secretary.
3. **ALUMNI RELATIONS:**
   William R. Baker, Eleanor Cox, Ellen Nelson, George Soderberg, Thomas Fleming, Secretary.
4. **ASSEMBLY AND LYCEUM:**
   C. L. Rich, Ralph Betterley, Harold R. Cooke, Barbara Lehr, Marjorie Leland, F. E. Tustison, Marceline Erickson, Secretary. Jean Sterner, Irving Christiansen.
5. **COMMENCEMENT:**
   Harold R. Cooke, Mary Blazek, Mrs. Ruby Niebauer, Merle M. Price, Herman Arneson, Secretary.
6. **CURRICULUM:**
   E. R. Oetting, Darvey Carlsen, Eleanor Cox, Eileen Elliott, Myron Harbour, John Jarvis, Floyd Keith, Lillian Jeter, Secretary.
7. **FINANCE AND AUDITS:**
   Daniel Green, David Barnard, Margaret Harper, Gladys Trullinger, Secretary.
8. **FACULTY SOCIAL AFFAIRS:**
   Ralph Betterley, Thomas Fleming, Mary Killian, Marjorie Leland, June Miller, Melvin Sutker, George Soderberg, Secretary.
9. **GRADUATE:**
   Ray A. Wigen, Dwight L. Agnew, Eileen Elliott, Ann Marshall, E. R. Oetting, J. Edgar Ray, Stuart Anderson, Secretary.
10. **HEALTH AND ATHLETICS:**
    Ray C. Johnson, Keturah Antrim, Myron Harbour, Mrs. Gertrude Plonsky, Mrs. Benita Smith, Dwight Chinnock, Secretary.
11. **HOUSING:**
    Ray F. Kranzusch, Harry F. Good, H. M. Hansen, K. T. Olsen, Merle M. Price, Secretary.
12. **LIBRARY:**
    Lillian Froggatt, Mary Blazek, Gertrude Callahan, Daniel Green, Wauneta Hain, Ellen Nelson, Elaine Speicher, Secretary.
13. **ACCREDITING:**
    Ray A. Wigen, Clyde A. Bowman, Alice J. Kirk.
14. **PLACEMENT:**
    Gertrude M. O'Brien, Clyde A. Bowman, Dwight D. Chinnock, Alice J. Kirk, Ann Noble.

15. STUDENT AFFAIRS:

Herman C. Arneson, Keturah Antrim, Darvey Carlsen, Dwight Chinnock, Harry F. Good, Ralph G. Iverson, Lillian Jeter, Ray C. Johnson, Mary McCalmont, Harold C. Milnes, Hazel Van Ness, Merle M. Price, Secretary, Beth Robertson, Walter Dusold.

THE FIRST NAMED MEMBER OF EACH COMMITTEE PRESIDES.

THE PRESIDENT AND ACADEMIC DEANS ARE EX-OFFICIO MEMBERS OF ALL COMMITTEES.

OFFICERS OF ADMINISTRATION

VERNE C. FRYKLUND, President
CLYDE A. BOWMAN, Dean, Division of Industrial Education, Director of Summer Session
ALICE J. KIRK, Dean, Division of Home Economics
KETURAH ANTRIM, Dean of Women
MERLE M. PRICE, Dean of Men
RAY A. WIGEN, Director of Graduate Studies
GERTRUDE M. O'BRIEN, Registrar, Placement Chairman
MINNIE J. BECKER, Secretary to the President
BRYARD M. FUNK, Business Manager
RUDOLPH ROEN, Superintendent of Buildings and Grounds
H. O. STROZINSKY, Chief Engineer
MRS. GERTRUDE PLONSKY, College Nurse
DR. JOHN O'NEILL, College Physician
MARY KILLIAN, Director of Cafeteria
LORNA LITTLE, Assistant Director of Cafeteria
MRS. REBECCA NELSON, Director of Halls and Housing, Hostess of Tainter Hall
MRS. GERTRUDE ADAMS, Hostess of Tainter Annex
RUTH DAVIES, Hostess of Eichelberger Hall
MELVIN SUTKER, Resident Head, Lynwood Hall
LILLIAN M. FROGGATT, Librarian
ELAINE SPEICHER, Assistant Librarian
MRS. BEULAH C. HOWISON, Assistant Librarian
MYRTLE STRAND, Assistant Librarian
MRS. ROSE ALT, Office Assistant-Stenographer
PEARL ANDERSON, Office Assistant-Stenographer
MRS. SARAH BOETCHER, Office Assistant-Stenographer
MRS. ROSEMARY CALDER, Office Assistant-Stenographer
MRS. DORIS GANNEGAN, Office Assistant-Stenographer
JANET KOTHLOW, Office Assistant-Stenographer
MRS. LYNNETTE McCARTHY, Office Assistant-Stenographer
JANE McDONALD, Office Assistant-Stenographer
LORRAINE TIETZ, Office Assistant-Stenographer
AGNES WINSTON, Office Assistant-Stenographer

FACULTY

VERNE C. FRYKLUND, President

The Stout Institute, Diploma, 1916; Colorado College of Education, A. B., 1923; University of Missouri, M. A., 1927; University of Minnesota, Ph. D., 1933; The Stout Institute since 1945.

DWIGHT L. AGNEW, Head of Department and Assistant Professor of Social Science.

Park College, Parkville, Missouri, A. B., 1935; University of Iowa, A. M., 1938; Ph. D., 1947; The Stout Institute since 1947.

STUART ANDERSON, Assistant Professor of Education. Graduate Studies.

The Stout Institute, B. S., 1935; Marquette University, M. Ed., 1938; University of Wisconsin, Graduate Study; The Stout Institute since 1946.

KETURAH ANTRIM, Dean of Women and Assistant Professor of Physical Education.

Lake Forest University, Lake Forest, Illinois, B. A., 1923; University of Wisconsin, Ph. M., 1932; The Stout Institute since 1936.

HERMAN C. ARNESON, Assistant Professor of Biology.

Northland College, B. A., 1930; University of Minnesota, M. A., 1932; The Stout Institute since 1945.

WILLIAM R. BAKER, Head of Department of Graphic Arts and Professor of Industrial Education. Printing and Publications.

Northern Illinois Teachers College, Diploma, 1913; Mergenthaler Linotype School, Certificate, 1920; The Stout Institute, B. S., 1925; University of Minnesota, M. A., 1936; The Stout Institute since 1933.

DAVID BARNARD, Instructor of Visual Education.

The Stout Institute, B. S., 1946; M. S., 1947; The Stout Institute since 1947.

DOROTHY JOHNSON BARNETT, Lecturer in Home Economics Education.

Kirksville, Missouri, State Teachers College, B. S., 1928; University of Missouri, A. M., 1933; Teacher Trainer for Vocational Homemaking Education, State Board of Vocational and Adult Education; The Stout Institute since 1936.

RALPH BETTERLEY, Instructor of Industrial Education. General Metal, Sheet Metal.

The Stout Institute, B. S., 1935; M. S., 1947; The Stout Institute since 1946.

MARY BLAZEK, Associate Professor of Food and Nutrition.

Cleveland Normal, Diploma, 1920; Antioch College, B. S., 1922; Columbia University, M. A., 1933; The Stout Institute since 1947.

CLYDE A. BOWMAN, Dean of the Division and Professor of Industrial Education.

State Normal, River Falls, Wisconsin, Diploma, 1907; The Stout Institute, Diploma, 1909; Columbia University, B. S., 1915; University of Wisconsin, M. S., 1927; Graduate Study. The Stout Institute since 1919.

ARTHUR G. BROWN, Associate Professor of Education.

Macalaster College, B. S., 1914; University of Wisconsin, M. S., 1928; University of Minnesota, Graduate Study; The Stout Institute since 1920.

GERTRUDE L. CALLAHAN, Head of Department and Professor of English.

University of Chicago, Ph. B., 1912; University of Wisconsin, Ph. M., 1927; The Stout Institute since 1927.

DARVEY E. CARLSEN, Assistant Professor of Industrial Education. Printing.

The Stout Institute, B. S., 1944; M. S., 1946. The Stout Institute since 1942.

CLARA C. CARRISON, Assistant Professor of Food and Nutrition.

Western Illinois State Teachers College, B. E., 1927; University of Iowa, M. S., 1937; The Stout Institute since 1948.

DWIGHT D. CHINNOCK, Supervisor of Student Teaching and Associate Professor of Education.

River Falls Teachers College, Diploma, 1923; The Stout Institute, B. S., 1937; University of Minnesota, M. A., 1941; The Stout Institute since 1940.

HAROLD R. COOKE, Director and Associate Professor of Music.

Certificates in Music Theory from Vienna, Austria, and New England Conservatory of Music; Minneapolis College of Music, B. Mus., 1933; MacPhail School of Music, M. Mus. Ed., 1940; The Stout Institute since 1934.

ELEANOR H. COX, Associate Professor of Science and Mathematics. Chemistry.

University of Wisconsin, B. S., 1921; M. A., 1939; The Stout Institute since 1942.

EILEEN ELLIOTT, Head of Department and Professor of Food and Nutrition.

N.W.M.S.T.C., Maryville, Missouri, B. S., 1937; Columbia University, M. A., 1940; University of Missouri, Ed. D., 1947; The Stout Institute since 1947.

MARCELINE ERICKSON, Associate Professor of English. Speech.

Columbia College of Expression, Chicago, Illinois, 1927 and 1928; Lombard College, B. A., 1929; University of Iowa, M. A., 1932; University of Wisconsin, Graduate Study; The Stout Institute since 1940.

THOMAS FLEMING, Instructor of English.

Eau Claire State Teachers College, B. S., 1941; University of Wisconsin, M. A., 1946; The Stout Institute since 1946.

H. F. GOOD, Head of Department of Electricity and Mechanics and Professor of Industrial Education. Auto Mechanics, Electrical Work, Science.

Iowa State College, B. S. in Electrical Engineering, 1913; B. S. in Agricultural Engineering, 1914; M. S., 1929; The Stout Institute since 1918.

DANIEL GREEN, Associate Professor of Industrial Education. Machine Drawing, General Drawing.

University of Chicago, B. S., 1914; University of Minnesota, M. A., 1932; The Stout Institute since 1924.

WAUNETA HAIN, Instructor of English.

Milton College, B. A., 1930; University of Wisconsin, M. A., 1942; The Stout Institute since 1946.

H. M. HANSEN, Associate Professor of Industrial Education.

The Stout Institute, Diploma, 1918; B. S., 1928; University of Minnesota, M. A., 1936; The Stout Institute since 1912.

MYRON HARBOUR, Assistant Professor of Science and Mathematics.

Superior State Teachers College, B. E., 1929; University of Wisconsin, M. A., 1926; The Stout Institute since 1947.

MARGARET E. HARPER, Instructor in Home Economics Education.

Kansas Wesleyan University, B. S., 1929; Kansas State College, M. S., 1943; The Stout Institute since 1943.

RALPH G. IVERSON, Instructor of Psychology and Education.

Augustana College, Sioux Falls, South Dakota, A. B., 1927; University of Minnesota, M. A., 1935; University of Minnesota, Graduate Study; The Stout Institute since 1947.

JOHN JARVIS, Assistant Professor of Science and Mathematics.

University of Wisconsin, B. S. in Electrical Engineering, 1931; The Stout Institute, B. S., 1936; Wayne University, M. E., 1941; The Stout Institute since 1946.

LILLIAN JETER, Head of Department of Clothing and Professor of Home Economics.

Kansas State Agricultural College, B. S., 1916; Columbia University Teachers College, M. A., 1925; The Stout Institute since 1927.

RAY C. JOHNSON, Head of Department and Associate Professor of Physical Education.

State Teachers College, Moorhead, Minnesota, B. E., 1930; Columbia University, M. A., 1935; The Stout Institute since 1938.

FLOYD KEITH, Head of Department of Metalworking and Professor of Industrial Education. Sheet Metal.

River Falls Normal, Diploma, 1915; The Stout Institute, B. S., 1922; Iowa State College, M. S., 1929; The Stout Institute since 1922.

MARY KILLIAN, Assistant Professor of Food, Institution Management.

Municipal University, Omaha, Nebraska, B. S., 1920; Creighton University, Omaha, Nebraska, M. A., 1929; The Stout Institute since 1947.

ALICE J. KIRK, Dean of the Division and Professor of Home Economics.
University of Wisconsin, B. S., 1920; Columbia University, M.A., 1935; Ed. D., 1946; The Stout Institute since 1947.

RAY F. KRANZUSCH, Associate Professor of Industrial Education. Auto Mechanics, General Mechanics.
The Stout Institute, B. S., 1936; Iowa State College, M. S., 1941; The Stout Institute since 1924.

BARBARA LEHR, Instructor of English.
Siena College, Memphis, A. B., 1936; Boston College, M. A., 1942; Northwestern University, Graduate Study. The Stout Institute since 1946.

MARJORIE LELAND, Instructor of Related Art.
University of Minnesota, B. S., 1942; The Stout Institute since 1947.

ANNE MARSHALL, Head of Department of Science and Mathematics and Professor of Biological Science.
Denison University, Granville, Ohio, B. S. 1925, Ohio State University, M. A., 1928; Ph. D., 1939; The Stout Institute since 1939.

MARY McCALMONT, Associate Professor of Science and Mathematics. Chemistry.
Westminister College, New Wilmington, Pennsylvania, B. S., 1906; University of Wisconsin, M. S., 1921; The Stout Institute since 1912.

JUNE MILLER, Instructor of Physical Education.
University of Minnesota, B. S., 1944; The Stout Institute since 1946.

HAROLD C. MILNES, Associate Professor of Industrial Education. Machine Shop, Foundry, Patternmaking.
Armour Institute, Certificate, 1906; The Stout Institute, B. S., 1928; Iowa State College, M. S., 1936; The Stout Institute since 1916.

ELLEN FREDERICKA NELSON, Instructor of Home Economics Education.
The Stout Institute, B. S., 1932, M. S., 1947; The Stout Institute since 1947.

RUBY RUTH NIEBAUER, Head of Department and Assistant Professor of Related Art.
Superior State Teachers College, Diploma, 1930; University of Wisconsin, B. S., 1946; M. S., 1947; The Stout Institute since 1947.

ANN NOBLE, Head of Department and Assistant Professor of Home Economics Education.
Simpson College, Indianola, Iowa, A. B., 1922; University of Wisconsin, M. S., 1937; Colorado Agricultural College, Graduate Study; The Stout Institute since 1947.

ERICH RICHARD OETTING, Head of Department and Associate Professor of Psychology and Education.
Wayne State Teachers College, Wayne, Nebraska, B. S., 1924; University of Wisconsin; University of Nebraska, M. A., 1935; Ph. D., 1941; The Stout Institute since 1945.

K. T. OLSEN, Assistant Professor of Industrial Education. Woodworking, Carpentry.
Iowa State College, B. S., 1930; M. S., 1936; The Stout Institute since 1947.

MERLE M. PRICE, Dean of Men and Associate Professor of Social Science.
State Teachers College, St. Cloud, Minnesota, Diploma, 1921; University of Minnesota, B. S., 1924; M. A., 1929; University of Minnesota, Graduate Study; The Stout Institute since 1929.

J. E. RAY, Associate Professor of Industrial Education. Architectural and Freehand Drawing, Masonry, Building Construction.
Williamson Trade School, Diploma, 1908; The Stout Institute, B. S., 1922; Iowa State College, M. S., 1930; New York University, Ed. D., 1944; The Stout Institute since 1930.

CORYDON L. RICH, Associate Professor of Science and Mathematics.
State Teachers College, Oshkosh, Wisconsin, Ed. B., 1929; University of Wisconsin, Ph. M., 1930; The Stout Institute since 1931.

BENITA GROTE SMITH, Director of Nursery School and Associate Professor of Home Economics.
Iowa State College, B. S., 1928; Merrill-Palmer School, Detroit; Iowa State College, M. S., 1941; University of Minnesota, Graduate Study. The Stout Institute since 1943.

GEORGE SODERBERG, Instructor of Industrial Education. Woodworking.
The Stout Institute, B. S., 1944; The Stout Institute since 1945.

MELVIN SUTKER, Instructor of Social Science.
Northwestern University, B. S., 1939; Columbia University, M. A., 1947; The Stout Institute since 1947.

GLADYS TRULLINGER, Assistant Professor of Home Economics. Home Management.
University of Nebraska, B. S., 1926; M. S., 1936. The Stout Institute since 1936.

F. E. TUSTISON, Associate Professor of Science and Mathematics.
Ohio Wesleyan University, B. S., 1909; University of Wisconsin, M.S., 1928. The Stout Institute since 1920.

HAZEL VAN NESS, Associate Professor of Home Economics. Clothing.
Syracuse University, B. S., 1921; Columbia University, A. M., 1929; The Stout Institute since 1929.

RAY A. WIGEN, Director of Graduate Studies and Professor of Education.
River Falls State Teachers College, Diploma, 1916; University of Minnesota, B. S., 1930; M. A., 1933; Graduate Study. The Stout Institute since 1933.

GENERAL INFORMATION

The Stout Institute has been training teachers for vocational, industrial and home economics education since 1893. During the years of its work, it started with a two year course, then the four year course and then in 1935, the fifth year on the graduate level, leading to the degree of Master of Science, was authorized. During these years of development and expansion, it held consistently to the function of preparing teachers and administrators in these fields of work.

Provisions are made for students to complete requirements for the degree of Bachelor of Science or to take undergraduate work beyond the degree requirements for refresher purposes. Beginning with the second semester of the college year 1945-46, graduate work has been offered during both the regular session and the summer session. This curriculum leads to the degree of Master of Science with the major in vocational education, industrial arts education, or home economics education. For persons interested in study in these fields, The Stout Institute has unusual facilities and an unexcelled faculty.

The college year is thirty-six weeks in length. There are two semesters of eighteen weeks each. The summer session is six weeks in length. It opens each year in June, two weeks after the close of the regular session.

HISTORY

With the creation of the State of Wisconsin in 1848 there came immediate recognition of the educational needs of the new commonwealth. Teacher training received prompt attention in the creation of its first normal school. Massachusetts and Pennsylvania preceded Wisconsin in the organization of normal schools; but the record shows that in 1867, less than twenty years later, Wisconsin was leading even these two states and all other states in the number of state normal schools in operation.

In 1867 Wisconsin was operating five state normal schools, just one more than existed in any other state. Today the state's present political and educational leadership is dedicated to the further development of the state's educational equipment and professional standards.

In 1911, because of the importance of Industrial and Home Economics Education in the schools of the state, The Stout Institute was taken over by the state from a private ownership and operation. By legislative enactment Stout was made the state's teacher training school for teachers in these two fields of education. The Stout Institute has for almost a half century devoted its efforts to the preparation of teachers in Home Economics, Industrial and Vocational Education.

Here follows a brief summary of the history of The Stout Institute.

In 1889 Manual Training was inaugurated in the Menomonie Public Schools in all twelve grades through high school.

1893 new buildings were built and Manual Training was placed under separate supervision.

1903 The Stout Training School was founded under private patronage. The name was changed to The Stout Institute in 1908.

1911 The Stout Institute was presented to the state, accepted and placed under the control of the Board of Trustees of The Stout Institute.

1917 The Stout Institute was by legislative action made a college with degree granting power.

1935 Through legislative action The Stout Institute was authorized to undertake graduate work and to grant the Master of Science degree with designated majors in (1) Industrial Education (2) Vocational Education or (3) Home Economics Education.

The Stout Institute was founded as "Stout Manual Training School" by Senator James H. Stout, of Menomonie, who financed the institution through twenty-two long critical years up to the time of his death in 1910.

The history would not be complete without the mention of Lorenzo Dow Harvey, who, retiring from the State Superintendency of Instruction in Wisconsin, on the urgent invitation of Senator Stout, assumed the presidency in 1903 of The Stout Manual Training School and later The Stout Institute. President Harvey continued in charge of The Stout Institute until the time of his death in June, 1922. In 1923 Burton Edsel Nelson became president, continuing until his retirement in 1945.

AIMS OF THE COLLEGE

The Stout Institute is the Wisconsin state college of industrial and home economics education. It specializes in technical training of men and women for professional work in these fields. While technical training is emphasized at The Stout Institute, the curriculum is designed to give students a well-rounded education. Departments are maintained in the social sciences, English, mathematics, sciences, physical education and music. The Stout Institute believes that men and women should not only be technically trained, but also should be provided with the kind of education which will make them responsible and informed citizens, equip them with an understanding of our changing civilization, and enable them to enjoy the arts of living.

The main task of The Stout Institute is to prepare teachers in industrial, vocational and home economics education. Stout is the only college in America exclusively training students in these fields. Stout not only prepares for the teaching profession, but also a variety of other work.

Students in industrial education may prepare for technical and executive positions in industry. Industrial education graduates have found advantageous employment as trainers in industrial plants education departments, in production and planning departments of manufacturing plants, in maintenance departments, as technically trained salesmen, and in various other types of employment in industry.

The home economics courses at Stout provide preparation directed toward a variety of work other than teaching. Students may train for responsible positions as dietitians, teachers and supervisors of nursery schools, managers of cafeterias and restaurants, in commercial demonstration work, in food and textile research, and as writers on home economics problems for magazines and newspapers. Home economics education, for women, regardless of what field a student may plan to enter, is the kind of technical and cultural education which will prepare women for a more satisfying life.

While most of the students come from Wisconsin, almost every state in the Union has been represented in the enrollment at The Stout Institute. Through these years the enrollment at Stout has been more than national in character. In any one year as many as thirty-eight states, Canada, Panama, and Peru have been represented. Students almost always have been in attendance from our territorial possessions.

Stout graduates are teaching in every state in the Union, in Canada, the Canal Zone, Hawaii, Cuba and the West Indies.

COLLEGE ASSOCIATION AFFILIATIONS

Soon after The Stout Institute restricted its work to a four-year curriculum, it was accepted by the North Central Association as a member of the teachers college group and two years later was taken into full college membership. Since the formation of the American Association of Teachers Colleges, The Stout Institute has maintained membership in that organization. The college is also a member of the American Council on Education.

BUILDINGS AND GROUNDS

Four large, thoroughly equipped buildings (the Home Economics Building, the Industrial Education Building, the Gymnasium, and the Trades Building) comprise the central plant. In addition there are four dormitories, one hundred sixteen small houses for veterans, a home management house, and an infirmary.

The grounds include spacious lawns for the women's dormitories and veterans homes, a practice field, tennis courts, and the Burton E. Nelson Athletic Field. During the fall of 1935, a shelter house was constructed, which includes dressing rooms and shower rooms for two teams. The administration plans for the immediate future include the construction of a new library building, and a new field house, the site for which the state recently purchased. Funds are available and work will begin as soon as general construction can be undertaken.

The Library

The Library is at this time housed in the Home Economics Building. It provides a wide range of reference material, particularly on home economics and industrial and vocational education, but is also rich in fields of art, the social and natural sciences, economics, history and government, mathematics and engineering, manufacturing and industry. A large number of books and magazines for purely cultural reading is provided.

Laboratories and Equipment

The shops for the teaching of industrial subjects are all well equipped and kept up-to-date. The Trades Building is devoted exclusively to shops containing all needful equipment for elementary and advanced classes in carpentry, cabinetmaking, general woodwork, auto mechanics, sheet metal, painting and finishing, architectural and machine drafting, and visual education. It has provision for use of all types of visual education equipment. The Industrial Education Building contains shops completely equipped for work in general mechanics, foundry, printing, general metal, electrical work, and machine shop practice. A physics laboratory and shops for practice teaching are also housed here. Necessary lecture rooms for general subjects are provided throughout the building.

The laboratories for home economics instruction are among the best in the country. All located in the large home economics and administration building, they include units for textiles and arts, nutrition and foods, nursery school, homemaking, and sciences. Lecture and demonstration rooms are comfortable and commodious. Throughout, the equipment is up-to-date and adequate for all levels of work.

Auditorium

One of the wings of the Home Economics Building houses a large, modern auditorium with a seating capacity of 800. At least once each week an attractive program of an educational or entertainment nature is presented by nationally known speakers or entertainers. The large stage makes possible the appearance of large musical organizations, local and traveling, and provides excellent facilities for work in dramatics.

Dormitories for Women

Bertha Tainter Hall is furnished with all modern conveniences, and is well-lighted, heated, and ventilated. This building was thoroughly remodeled recently, and the interior was completely modernized, redecorated, and largely refurnished.

Tainter Annex adjoining it has been remodeled, and modernized throughout. More light and room space are provided. Old bathrooms were removed and new bathrooms installed. Another living room and a sun room were added. The gray stucco on the outside has been replaced by fireproof asbestos shingles which add greatly to the appearance of the building and materially reduce fire hazard.

The Mary Eichelberger Hall has been so named because the building was purchased out of a $20,000 legacy provided for in the will of Mrs. Mary Eichelberger, of Horicon, Wisconsin.

All nonresident freshman and sophmore women are required to live in dormitories. All junior and senior women under twenty-five years of age are also expected to live in dormitories, when accommodations are available.

Dormitories for Men

Lynwood Hall was built for the purpose for which it is used and is in every appointment adequate and complete.

Recently elaborate improvements have been made. These include the enlargement of living and recreational rooms, sound proofing the building, installation of new bath and toilet facilities. Exterior improvements add materially to the appearance and attractiveness of the building.

Concerning All Dormitories

Room rent in dormitories is payable by semesters, in advance at the beginning of each semester. Board is payable four weeks in advance.

The charge for a room for each student for one semester of eighteen weeks is $67.50. This price applies to all dormitories. A $10.00 advance deposit is required on all rooms.

In Tainter Hall and Annex, the charge for meals is $7.50 per week. A laundry in connection with the women's dormitories provides service to students in those dormitories at a minimum charge. All Stout dining rooms are under the direct supervision of trained dietitians. Balanced meals are carefully planned with the thought in mind that the health of the students is of primary importance.

Rooms in dormitories will be available on the Sunday immediately preceding registration day in the fall. Meals will be served beginning at noon the next day.

All first year entrants and all transfer students must fill out an application form for a room and send it as early as possible to the Director of Dormitories at Tainter Hall. The necessary form is one of the several forms included in the enrollment papers.

All rooms are assigned for the entire academic year. Each room is furnished with new beds and inner spring mattresses, pillows, dresser, study table, chairs, and bookcases. Sheets, pillow cases, and laundrying for same are also supplied. The student must supply dresser scarf, couch cover, waste paper basket, towels, blankets, or comfortables, and simple curtains which should be arranged for with roommate after assignment of room has been made.

Students are requested not to bring additional furniture, particularly floor lamps. A practical study lamp for the table with rubber insulated cord and plug is permissible and desirable. All such lamps will have to be inspected by the school electrician before they are used. Radios are not permitted in students' rooms. A community radio is supplied.

The Infirmary

The Stout Institute maintains an infirmary for the care of students, where every detail of health is carefully supervised. A resident registered nurse supervises the health of students throughout the college and is on duty at the infirmary. The nurse maintains regular office hours in her rooms in the Home Economics Building. A college physician is available for consultations. Students are given a medical examination annually.

A Student Health fee of two dollars and fifty cents per semester is paid by all students. This fee insures dispensary service, physical examinations and three days of hospital care without charge. After the third day a charge of $1.50 a day will be made for meals. Students rooming in dormitories where meals are served will not be charged for meals while in the infirmary.

Any student who is too ill to attend classes should report at once to the school nurse. Students living in Menomonie shall have their parents or guardian notify the school nurse. Cases of severe illness or other serious situations that will enforce prolonged absence should be reported to the Dean of Home Economics or the Dean of Industrial Education.

Home Management House

A thoroughly modern and fully equipped Home Management House located near the Infirmary is a brick veneer building, of ample size, containing all conveniences and accommodations needed in such a building. Recreation room, store room, and laundry are found in the basement. A large living room, dining room, kitchen, and director's living quarters are on the first floor. On the second floor are large comfortable, well-lighted student rooms. The building is heated by an oil burning furnace, and the air is conditioned for moisture and temperature by modern apparatus.

The Tea Room

The Stout Tea Room is used chiefly as a laboratory for the class in applied institution management. During the period given to instruction in institution management, attractive, well balanced, inexpensive meals are served under the direction of the director of institution management. On these occcasions, the Tea Room is open to students, faculty and their friends.

The Cafeteria

The Stout Cafeteria, located in the east end of the Home Economics Building, is used by students, faculty, and their friends. The dining room is modern and colorful. Meals are served daily. The food is excellent and inexpensive. Students can obtain adequate meals at from $7.00 to $8.50 per week. The complete cafeteria service is under the direction of the Director of Institution Management. Special groups may obtain reservations for meals from the Director. All nonresident freshman men are advised to eat their meals in the cafeteria, using meal tickets provided as a means of checking attendance. The cafeteria will open on Monday noon of the first week of the college year.

Other Living Facilities

Accommodations for men and women not living in dormitories may be procured in the city at varying rates, depending upon location and quality of service. Rooms may be had as low as $3.00 per week per person, and table board may be obtained in private homes at $6.00 to $8.00.

ADMISSION TO COLLEGE

The Stout Institute provides three opportunities for registration during the year. Students may register at the beginning of the first semester in September, the beginning of the second semester in January or at the beginning of the summer session in June.

Admission to college may be secured:

1. By presenting a certificate of graduation from an accredited high school.
2. By submitting evidence of studies successfully pursued in another institution of higher learning.
3. By qualifying as an adult special student.

Prospective students may learn at any time by correspondence with the Registrar whether or not they have the necessary qualifications for admission and upon what basis they may be admitted.

All credentials should be filed sufficiently in advance of the date chosen to permit the Registrar to pass upon them and to issue the proper letter of admission. Candidates for admission in September should have their credentials filed with the Registrar by the first of August. The credentials must in every case include a complete record of all previous secondary school and advanced work.

Persons who plan to enter Stout should fill out and file application for enrollment as early as possible. Blanks will be furnished promptly on request. Applications for admission must be complete and accurate. Failure to include requested information or misrepresentation may be the basis for dismissal. The health certificate, when filled out must be forwarded to the President before the beginning of the semester. Late registration is discouraged. All students are expected to register on general registration days.

Entrance Requirements

Entrance requirements of The Stout Institute shall be interpreted as graduation from an approved high school or equivalent training. Not less than 15 units shall be accepted.

1. The following units shall be required of all:
   English ..... 3 units
   Algebra ..... 1 unit
2. Two units are to be presented from one of the following:
   Foreign Language, History, Social Science, Science.
3. In addition to the units required under 1 and 2, a sufficient number of units to make a total of fifteen must be offered from groups A and B. Not more than 5 units may be offered from group B.

Group A	Group B
English and Speech	Agriculture
Foreign Language	Commercial Subjects
History and Social Science	Home Economics
Mathematics	Industrial Arts
Science	Mechanical Drawing
Advanced Applied Music and Art	Optional (2 units)

4. A high school graduate need not meet the above requirements if he is recommended by his high school principal and if he stands in the upper one-half of his class. But it is required that wherever mathematics is a prerequisite for successful work in a course, the high school deficiency must be made up if it exists, and for this the college will not hold itself responsible for providing facilities.

All first year entrants and all transfer students are required to take Freshman Counseling Tests which are given during registration week. A special two dollar fee will be charged those who take the examinations at other than the scheduled time.

A supplementary physical examination is made of all first year students and an annual examination of all students is required. The examination is made by the college physician. The charge for this examination is included in the infirmary fee referred to elsewhere. These credentials, together with an approved statement of rooming arrangements, are required before the enrollment is considered complete.

Transferred Credits

Students entering The Stout Institute who have had any work whatsoever in another institution of higher learning, regardless of whether or not they wish to receive credit for it, must submit complete credentials of both their high school and college work. All such transcripts and supplementary material should be sent at least a month preceding the opening of the session the student desires to enter.

Students who hold bachelors' degrees from other institutions must spend one year in residence and meet the minimum requirements of their major in order to obtain the degree of Bachelor of Science from The Stout Institute.

Sixteen semester hours of approved courses done through extension or correspondence, not more than five semester hours of which shall be correspondence credit, shall be the limit accepted by The Stout Institute for graduation requirements.

Transfer of Records

Students wishing to transfer from The Stout Institute to another institution should request the Registrar to send a transcript of record and letter of dismissal, giving notice of at least one week.

Veterans

Curriculum adjustments will provide for a modified program to meet the needs of students who have had service in the U. S. Armed Forces.

Credit for educational experience in the U. S. Armed Forces will be assigned according to the recommendations of the Guide compiled by the American Council on Education.

REQUIREMENTS FOR GRADUATION

In order to receive a degree, the student not only must gain the required number of credits in the course which he is pursuing, but also must attain a certain standard of scholarship. This standard is fixed by grade points as credits. Grade points are apportioned as follows:

A (94-100) 3 grade points per semester hour credit.
B (86-93) 2 grade points per semester hour credit.
C (78-85) 1 grade point per semester hour credit.
D (70-77) 0 grade point per semester hour credit.
F (Below 70) Failure

Inc. "Incompletes" are given only in cases in which the absence incurred has been due to situations over which neither the student nor the teacher has any control. To secure an Incomplete, a student must have a passing grade in the course at the time of withdrawal.

Fully registered students at The Stout Institute, in the Division of Home Economics, must complete one hundred and twenty-four semester hours and earn one hundred and twenty-four grade points, plus the requirements in physical education. Students in the Division of Industrial Education must complete one hundred and twenty-eight semester hours and earn one hundred twenty-eight grade points, plus the requirements in physical education.

Each candidate for graduation must in addition to meeting the requirements in the major, have two academic minors of fifteen semester hours each.

The minimum residence requirement is thirty-two semester hours and thirty-two grade points to be earned in at least thirty-six weeks of attendance at Stout Institute. The last year of credit must be earned in residence at The Stout Institute. Candidates for diplomas are required to attend the Commencement Exercises.

THE DEGREE OF BACHELOR OF SCIENCE

The degree of Bachelor of Science is conferred upon all students completing curriculum requirements in the Division of Home Economics and in the Division of Industrial Education. These courses require four years of work beyond the high school. Upon completion of the work of the Education major a diploma is issued, which by statute is made the basis for a life certificate after two years of successful teaching in Wisconsin. This life certificate legally qualifies the holder to teach in the public schools of the state the subjects in which he has taken training. The license is issued by the Wisconsin State Department of Public Instruction.

PLACEMENT OF TEACHERS

Stout Institute maintains a Placement Office which assists qualified graduates in finding suitable positions as teachers or administrators in the schools of Wisconsin and other states. The number of calls for Stout Institute graduates always exceeds the supply. Junior and senior students have been called upon to meet the needs in an emergency. Salaries of Industrial Education and Home Economics teachers are higher than in most of the teaching fields. Graduates of Stout Institute hold key positions in industry as well as in education in all states in the Union and in many foreign countries.

EXPENSE ESTIMATES

Estimates on Usual Expenses Incurred by a Student for a Regular Session of Thirty-Six Weeks

Fee for Library, Physical Education, Laboratories and Shops (Semester $30.00)	$ 60.00
Student Health Fee (Semester $2.50)	5.00
Room Average Dormitory Rate (Semester $67.50)	135.00
Board-Dormitory Dining Room or Cafeteria	270.00
Laundry	35.00
S.S.A. Membership (Semester $9.00)	18.00
Material for Classes (average)	35.00
	558.00
Tuition for Nonresidents (Semester $62.00)	124.00
Estimated Expenses for Residents	523.00
Estimated Expenses for Nonresidents	647.00

The fact that incidental expenses, amusements, traveling expenses, postage, clothing, personal supplies, and the like are not included in the above must be taken into consideration.

Due to the uncertainty in cost ranges it may be necessary to change the above estimates from semester to semester.

Tuition, Regular Session

The tuition charge for nonresidents and the definition of nonresidents are covered in the following quotation from the Wisconsin statutes:

"Any student attending The Stout Institute who shall not have been a resident of the state for one year next preceding his first admission thereto shall pay a tuition fee of one hundred twenty-four dollars for the school year and a proportionate amount for attendance at the summer session."

Tuition is payable in advance each semester.

Shop and Laboratory Fees

Fees charged for shop and laboratory courses are included in the $30.00 semester fee referred to above. In addition to the shop and laboratory fees students are required to pay for any breakage or damage to buildings for which they are responsible. Fees are payable registration day at the beginning of each semester and summer session. The fee receipt is to be retained by the student to gain admittance to classes. A charge is made for duplicate receipts.

Library Fees

A library fee of $4.50 per semester formerly charged as a separate fee is now included in the $30.00 General Fee charge made to all students.

For this fee all necessary textbooks are furnished from the loan textbook library without any extra charge to students. The reference library is supplied with standard books needed to supplement textbooks in different subjects.

The reading room is supplied with daily and weekly newspapers, educational, literary, and technical periodicals adapted to the needs of the students and available for their use.

In addition to The Stout Institute library, students have access to the Memorial Free Library one block from The Stout Institute main buildings. The combined facilities of the two libraries make available 52,000 volumes, exclusive of public documents.

Incidental Fees

Diploma Fee	$5.00
Special Examination Fee (taken in special cases only)	2.00
Lock Deposit $1.00—Refunded	.75

SCHOLARSHIPS

Mary J. Eichelberger Fellowship

Six fellowships will be awarded each year to graduate students who are qualified to teach or to assist in class and laboratory work. The sum of $360.00 will be paid to each fellow. Selection of candidates is made by a committee of deans and is based upon qualification for a particular assignment on the campus and professional promise.

Legislative Scholarships

Out of state tuition exemptions in the amount of $124.00 per year will be granted in accordance with the provisions in the Wisconsin Statutes. By ruling of the Attorney General, The Stout Institute does not participate in the legislative scholarships of the teachers colleges which include exemption from fees for materials.

Alumni Scholarships

In addition to scholarships offered by the college, The Stout Institute Alumni Association has set up and maintains a scholarship award fund providing several sixty dollar cash awards each year. Any prospective student interested in one of these awards should either personally contact a Stout alumnus or write directly to the secretary of the Stout Institute Alumni Association at The Stout Institute, Menomonie, Wisconsin. The secretary can assist the prospective student in contacting a Stout alumnus where such assistance is needed. Any alumnus will be glad to give all the information needed and answer any questions which may arise concerning enrollment, attendance and college life at The Stout Institute.

Epsilon Pi Tau

Epsilon Pi Tau, national honorary scholastic fraternity in industrial arts education and vocational industrial education is represented on the Stout campus by Theta Chapter. The chapter gives certain scholastic financial awards to individuals in terms of professional promise.

Manual Arts Players

The Manual Arts Players Chapter of Alpha Psi Omega will offer a scholarship of twenty-five dollars to a student outstanding in the field of dramatics.

Pallas Athene

The Pallas Athene Society grants a scholarship of twenty-five dollars each year to a sophomore woman student, chosen on the basis of scholarship, participation in extra curricular activities, and her worthiness as a representative Home Economics student of Stout.

Philomatheans

The Philomathean society grants a twenty-five dollar award to a freshman Home Economics major. The student is selected on the basis of desirable personal qualities, loyal participation in college activities, and excellent scholarship.

Phi Upsilon Omicron

Tau Chapter of Phi Upsilon Omicron, national honorary scholastic fraternity in Home Economics, grants an annual scholarship of twenty-five dollars to an outstanding freshman woman majoring in Home Economics.

Y. W. C. A.

The Y. W. C. A. of The Stout Institute, mindful of the three-fold purpose of the organization (to aid in development of body, mind, and spirit of its members) attempts to help further this aim by making an award of twenty-five dollars to the young woman who is attaining these goals for herself and is also an active participant in worthwhile activities upon the campus.

Foreign Students

A yearly grant of $300 will be available alternately for one Industrial Education and one Home Economics student residing outside of the United States and its territories.

STUDENT LOANS

In 1921 Mrs. Mary J. Eichelberger of Horicon, Wisconsin willed to The Stout Institute twenty thousand dollars in preferred stocks and cash. This legacy came to the institution without stipulation as to the purpose or use to which it was to be put. For several years no use was made of this fund.

In 1942 the Administration recommended that the earnings from the principal and such part of the principal as might be necessary should be used in making loans to worthy and capable students when in need. No part of the principal has been used. The fund has, through dividends and interest additions, increased to a considerable sum. Ten thousand dollars is now being used by students in attendance or is being repaid by students who have graduated.

Students who in the opinion of the Committee are in need of financial aid may be granted a loan from the Student Loan Fund. The Committee considers the scholarship, character, personality, and professional promise of the applicant in granting a loan. Freshmen are not eligible to use this money. The loans are payable within one year after the student leaves the college.

SELF-SUPPORT AND STUDENT AID

While there are opportunities for a student attending Stout to earn a part of his expenses, it should be borne in mind that the courses are designed to require the whole of his time and effort and that the amount of outside work he will be able to do cannot be great. For this reason students whose funds are insufficient to meet their expenses for at least the first year, are not encouraged to enter college. Students working to earn part of their expenses are expected to carry a reduced program.

As far as possible, students are employed for extra work about the library, laboratories, and in the cafeteria, and as janitors. Some oppor-

tunities offer themselves outside of school agencies. A great deal depends, of course, upon the ability and energy of the individual, and his willingness to do any kind of work. The best places are usually obtained by those who have been in college for some time and have established themselves as good workers.

Stout does not guarantee employment. It does, however, make a special effort through its college employment bureau to locate students needing work as a means of paying expenses.

COLLEGE ACTIVITIES

The Stout Institute offers a wide range of student activities. Besides the regular classes in physical education for men and women, Stout is represented each year by strong football, basketball, baseball, and track teams. Glee clubs, one for the men and one for the women, have been maintained for a number of years. The Symphonic Singers, an A Cappella choir as well as a band and an orchestra add greatly to the life of the school. All musical organizations are under the supervision of a trained and capable director. Dramatics is centered in the organization known as the Manual Arts Players Chapter of Alpha Psi Omega. A permanent Lyceum committee is maintained, operating each year a five and six number course of the very best talent available. Assemblies bring to the students many excellent lecturers, entertainers, musicians, artists and musical organizations of outstanding ability. The college paper, The Stoutonia, is published each Friday. The Tower, the college yearbook, is also a product of student activities at Stout.

All of these organizations through contests, concerts, plays, programs, contribute to the social life of the school. The management of admission, booking and relationship with various student activities is through the Stout Student Association, the officers of which are elected each spring at a regular all-school election.

The membership charge, $18.00 per year, is payable by all students, $9.00 at the beginning of each semester. This fee gives every student of the college admission to all athletic events including football, basketball, and baseball, all concerts by student musical organizations including the Band, Orchestra, Men's Glee Club, and Women's Glee Club, productions of the Manual Arts Players, all lyceum and assembly programs and other entertainments under the supervision of the student association, educational and other lectures, all student dances given under the auspices of the student association, and the subscription to the student weekly newspaper, The Stoutonia, the Tower, the college annual, and class membership. The Stout Student Association membership has eliminated the necessity for the many former student drives for the financial support of the usual college activities. The only exceptions are religious and social organizations. The Association has added much to the social atmosphere of the school and has systematized and made harmonious all school activities.

REFUNDS

Students who are compelled to withdraw from college by reason of illness, not due to poor physical conditions or ill health existing before entering, are entitled to a refund of tuition from the date when notice of such withdrawal is received to the end of the semester.

Students boarding in the dormitories are also entitled to a refund of whatever amount has been advanced for board beyond the date when notice of withdrawal is received.

Refund for advance payment of room rent in the dormitories is allowed from the date when the room is again rented. Effort is made to get an occupant at the earliest date possible.

As books and supplies for which fees are charged have to be bought in advance in quantities necessary to supply the entire enrollment, no refund of fees is made in any case.

GRADUATE PROGRAM

The graduate program at The Stout Institute is established to meet the present-day needs of teachers and administrators of Home Economics Education and Industrial Education. The graduate curriculum is planned so prospective teachers and administrators may earn the degree of Master of Science with the major in Industrial Education, Home Economics Education, Home Economics or Vocational Education. The teacher certification laws, the trade experience, the educational preparation, and professional objectives determine the type of graduate program essential to meet those specialized needs.

OBJECTIVES

The objectives of the graduate curriculum are:

1. Extension of the broad general culture of teachers.
2. Preparation in research procedures in home economics and industrial education.
3. Continued study for specific competency in one of the major fields; Home Economics, Industrial Education or Vocational Education.
4. Attainment of advanced skills in professional techniques or exploring new techniques.
5. Opportunity for concentrated study of the more strictly professional phases of teaching for those whose undergraduate study did not make adequate provision.
6. Provision for the development of desirable personal and social qualities of teachers.

ADMISSION

Admission requirements for the graduate program of The Stout Institute are as follows:

General Requirements—Students who hold the degree of Bachelor of Science from The Stout Institute, or its equivalent, may take graduate courses. Undergraduate records from colleges other than The Stout Institute are accepted from institutions that are accredited members of the American Association of Teachers Colleges, or of their appropriate regional accrediting agency, or State Board of Education, or State University. Students from colleges other than The Stout Institute must have their transcripts sent to the registrar not less than one month prior to the opening of school. Important consideration of the graduate committee in granting approval on admission applications will be that the student have an approximate grade point average of 1.5 ("C" plus) as an undergraduate. Evidence of satisfactory teaching experience is desirable. Students whose candidacy has not been clearly established will be accepted on probation. Graduate credit earned will not apply toward the requirements for the degree of Master of Science until after the student has been accepted as a candidate for the degree.

Examinations for admittance to candidacy will be scheduled at the end of the student's first nine weeks of graduate work in the regular session or during the second summer of graduate attendance when the work is being taken in summer sessions.

Applicants for Admission—to graduate studies should fill out the application form located in the back of this catalog. Send application form to the Director of Graduate Studies, The Stout Institute.

Special Requirements—Students who meet the general requirements for admission to graduate work must meet the undergraduate standards in order to be admitted to the graduate program for the following major fields:

Special Requirements—Major Fields

Home Economics Major—Undergraduate credits required: Home Economics courses, 42 semester hours; Education courses, 8 semester hours; Related Science, 20 semester hours. A variation of six semester hours is permitted.

Home Economics Education Major — Undergraduate credits required: Home Economics courses, 42 semester hours; Education courses including general psychology, 28 semester hours. A variation of 6 semester hours is permitted in each field provided the total is 70 semester hours.

Industrial Education Major—Undergraduate credits required: Technical shop and drafting courses, 42 semester hours; Education courses including general psychology, 28 semester hours. A variation of 6 semester hours is permitted in each field provided the total is 70 semester hours.

Vocational Major—Certified Vocational teachers with a Bachelor's degree in the fields of agriculture, commerce, engineering, industrial education and home economics education who possess 42 technical hours in their specialized fields, and 28 semester hours in education including general psychology may be admitted to graduate work for a vocational major. A variation of 6 semester hours in the technical or education field is permitted, provided the total is 70 semester hours. Students are required to secure statements of certification as vocational teachers from their respective State Vocational Directors. See elsewhere in this catalog for Wisconsin certification.

GRADUATE REQUIREMENTS

Graduate Requirements—The graduate requirements for the Master of Science Degree with a major in Industrial Education, Home Economics Education, Home Economics or Vocational Education are as follows:

1. Completion of 30 semester hours in one of the fields—Industrial Education; Home Economics Education; Home Economics or Vocational Education.

   Industrial Education
   Major Industrial Education—20 semester hours
   Minor Education—Science—10 semester hours

   Home Economics Education:
   Major—Home Economics Education—20 semester hours
   Minor—10 semester hours selected from courses in the following fields: Education, Science, Social Science, Home Economics.

   Home Economics:
   Major—20 semester hours in one of the following fields: Food and Nutrition; Clothing, Textiles and Related Art.
   Minor—10 semester hours selected from courses in the following fields: Education, Science, Social Science, Home Economics.

   Vocational Education:
   Major—Vocational Education—20 semester hours in Industrial Education, or Home Economics Education.
   Minor—10 semester hours in Education, Science, Social Science, Home Economics Education, or Home Economics.

2. **50% of the graduate work** must be scheduled in graduate courses **(500 - series).**
3. All senior college courses (300-400) series must be approved on the basis of the individual's needs as indicated by present objectives and previous courses.
4. Not more than three seminars, six semester hours in problems in technical shop fields, or six semester credits in workshops may be used for graduate credit.
5. Graduate courses **required of all students.**
   Ed. 501 Research Procedures—2 semester hours.
   I. E. or H. E. 510 Problems in Industrial Education or Home Economics Education—2 semester hours.
   Ed. 461 Educational Statistics is recommended for all students who have not had the course as an undergraduate.
6. Home Economics students must schedule both Special Problems and Seminar in their selected field in the major.
7. Transferred graduate credit from other institutions is limited to six semester hours. This credit must be recorded as graduate credit on original transcript. These credits must apply to student's sequence of courses at Stout. (Consult Director of Graduate Studies.)
8. Requirements for the Master's degree must be completed within a six year period. Requests for extensions will be given consideration by the Graduate Committee.
9. Residence requirements are one academic year or five six-week summer sessions. The acceptance of six semester hours of graduate credit from another institution, will reduce the residence requirement to four six-week summer sessions or three quarters (27 weeks) of the regular academic year.
10. A grade of (B) or better is required for all courses in the major. A grade of (C) or better is required for all courses in the minor.

GRADUATE OFFERINGS

The graduate program of The Stout Institute is organized in terms of the integrated five year program and in terms of major and minor preparations in the fields of Industrial Education, Home Economics Education, Home Economics, or Vocational Education.

The Integrated Five Year Program: Leaders in teacher education have long recognized that five years are essential to prepare qualified teachers. There are many courses in teacher preparation that cannot be included in a four year program. A student credit sheet is used for con-

trol of student faculty cooperative planning in terms of a balanced program and professional objectives. Each graduate student will secure a student credit sheet from the Director of Graduate Studies and select a major faculty adviser. The student should obtain the forms, **Basic Areas of Educational Preparation,** from the Director of Graduate Studies. The basic areas are philosophy of education, psychology, curriculum construction, research procedures, administration, supervision, special professional fields, instruction, social and economic competency, guidance, measurement and evaluation, and field service problems. Students should select courses in terms of undergraduate deficiencies, professional objectives and major and minor fields.

THE MAJOR AND MINOR INDUSTRIAL EDUCATION

Industrial Education Major—The requirements for the Master of Science degree with a major in Industrial Education are as follows:

Thirty semester hours are required with a distribution of credits as follows:

Twenty semester hours selected from the courses listed for Industrial Education major including one of the following plans:

Plan (A) Thesis in major field involving original research. The research to be prepared according to the approved form. Register for I. E. 570. Investigations for 2-4-6 semester hours, for a total of 6 semester hours.

Plan (B) Papers in two starred (*) graduate courses (500 series) for 3 semester hours each. Papers are to be prepared as part of the requirement in these courses and must conform to thesis standards.

COURSES

Ten semester hours from the courses listed for the minor in Industrial Education.

Industrial Education Courses—Major			Sem. Hrs.
Ed.	472	Coordination-Vocational Ed.	2
Ed.	459	Curriculum Procedures I	2
Ed.	568	Curriculum Procedures II	2
* I.E.	537	Curriculum Procedures III	2-3
Ed.	441	Educational Evaluation	2
* I.E.	520	Labor and Industrial Relations	2-3
* I.E.	516	Problems in Coordination	2-3
I.E.	510	Problems in Industrial Education	2
* I.E.	506	Problems in Supervision—Ind. Arts	2-3
* I.E.	514	Problems in Technical Fields	2-3
* I.E.	560	Problems in Visual Education	2-3
* I.E.	531	Problems Vocational Guidance	2-3
Ed.	501	Research Procedures	2
* I.E.	533	Survey Procedures—Vocational Education	2-3
Ed.	401	Vocational Guidance	2
Ed.	480	Theory & Organization of General Shop	2
Ed.	514	Vocational Psychology	2
I.E.	570	Investigations	2-4-6

Courses from the vocational major may be selected for the Industrial Education major.

Industrial Education and Vocational Education Minor (Education)			
S.S.	417	American Politics	2
Ed.	461	Educational Statistics	2
S.S.	407	History of Americas	2
S.S.	410	Modern World	4
* Ed.	513	Personality and Mental Health	2-3
Ed.	500	Philosophy of Modern Education	2
Ed.	502	Principles of Supervision	2
* Ed.	555	Psychology of Learning	2-3
S.S.	409	Recent History of U. S.	3
S.S.	411	Social Problems	2
Ed.	360	Visual Education	2

VOCATIONAL EDUCATION

The requirements for the Master of Science Degree with a major in Vocational Education are as follows:

Candidates must meet the requirements of The Stout Institute for the Bachelor of Science degree with a major in Vocational Education. They also must be certified vocational teachers.

Thirty semester hours are required with a distribution of credits as follows:

Twenty semester credits selected from the courses listed for Vocational Education major including one of the following plans:

Plan (A) Thesis in major field involving original research. The research to be prepared according to the approved form. Register for I.E. or H.E. 570—Investigations for 2-4-6 semester hours, for a total of 6 semester hours.

Plan (B) Papers in two starred (*) graduate courses (500) series for 3 semester hours each. Papers are to be prepared as part of the requirement in these courses and must conform to thesis standards.

COURSES

Ten semester hours from the courses listed for the minor in Vocational Education.

Vocational Education Courses (Industrial Education Division) Major			Sem. Hrs.
* I.E.	526	Administration Vocational Education	2-3
I.E.	527	Area Vocational Schools	2
I.E.	521	Conference Leadership	2
Ed.	472	Coordination in Vocational Education	2
Ed.	459	Curriculum Procedures I (Graphic Analysis)	2
Ed.	568	Curriculum Procedures II (Trade Analysis)	2
* I.E.	537	Curriculum Procedures III (Course Org.)	2-3
Ed.	303	Educational Psychology	2
Ed.	401	Guidance	2
I.E.	501	Occupational Hygiene and Safety	2
Ed.	402	Philosophy of Vocational and Adult Ed.	2
* I.E.	515	Problems in Administration of Voc. Ed.	2-3
I.E.	519	Problems in Apprenticeship Training	2
* I.E.	516	Problems in Coordination	2-3
I.E.	510	Problems in Industrial Education	2
* I.E.	506	Problems in Supervision	2-3
Ed.	443	Problems in Teaching Trade and Ind. Subj.	2
* I.E.	514	Problems in Technical Fields	2-3

* I.E.	560	Problems in Visual Education	2-3
* I.E.	531	Problems in Vocational Guidance	2-3
Ed.	501	Research Procedures	2
* I.E.	533	Survey Procedures—Vocational Education	2-3
Ed.	403	Trade and Industrial Education Workshop	2
Ed.	407	Teaching Trade and Industrial Subjects	2
Ed.	514	Vocational Psychology	2
Ed.	409	Workshop in Ele. Statistics (Test and Guid.)	2
Ed.	491	Workshop in Occ. Inf. and Guidance	2
Ed.	490	Workshop in Tests and Meas. in Counseling	2
I.E.	570	Investigations	2-4-6

VOCATIONAL TEACHER CLASSIFICATION

Classification Requirements—Wisconsin Vocational Teachers. The courses referred to as classification courses for Wisconsin Vocational Teachers are as follows:

For All

			Sem. Hrs.
Ed.	402	Philosophy of Vocational and Adult Ed.	2
Ed.	401	Vocational Guidance	2
Ed.	303	Educational Psychology	2
		Elementary Economics	4
		Socio-Economics Electives	4

For Home Economics

Ed.	413	Teaching Voc. and Ad. Homemaking	2
Ed.	416	Probs. in Teach Voc. and Ad. Homemaking	2

For Industrial Education

Ed.	407	Teaching Trade and Industrial Subjects	2
Ed.	443	Problems in Teaching Trade and Industrial Sub.	2

(For detailed information, see Teacher Training Series Bulletins—Wisconsin State Board of Vocational and Adult Education.)

HOME ECONOMICS VOCATIONAL EDUCATION

Candidates for the Vocational Major in Home Economics Education must meet the requirements of The Stout Institute for the Bachelor of Science degree with a major in Vocational Education. They must also be certified vocational teachers. Courses may be selected from the Home Economics Education major or from the Home Economics major. The student should select courses in terms of professional needs with the assistance of the faculty adviser. Twenty semester hours are required in the major field and ten semester hours are required in the minor field. All students are required to include Plan (A) or Plan (B) in their graduate program.

GRADUATE STUDIES IN HOME ECONOMICS

The graduate program leading to a Master of Science degree offers advanced students an opportunity to prepare for executive and administrative positions of leadership in the profession. Intensive and specialized courses are provided to enable students to prepare for selected professional objectives. Regardless of the major selected, the following general requirements must be met.

General Requirements

1. Thirty semester hours of credit are required.
2. Students must follow one of two plans:
   Plan (A) Thesis in major field involving original research. The research to be prepared according to the approved form. Register for H.E. 570—total credits—6 semester hours.
   Plan (B) Papers in specified Graduate Courses. Papers are to be prepared as part of the requirement of such courses and must be assembled according to approved forms as in Plan (A). Register for one of the following courses: H.E. 532, 518, 550, 540, 560—total credits—6 semester hours.
3. Ed. 501 Research Procedures—2 Sem. Hrs.
   H.E. 510 Problems in H.E. Education—2 Sem. Hrs.
4. Special committee: The candidate for the degree of Master of Science in Home Economics must select two members of the faculty to serve as her special committee. These are selected with the approval of the Dean of the Division of Home Economics who is a member of all graduate committees. One of these selected members who is chairman of the committee, must represent the field of concentration; the other may be chosen in a related field, depending upon the program selected by the candidate.

   The committee members' consent to serve, together with the plan for graduate study, must be filed with the Dean of the Division of Home Economics and the Director of Graduate Studies on the proper blank as soon as possible after the initial registration for graduate studies.

   Since admission to graduate status does not necessarily imply that the student is a candidate for an advanced degree, some students find it desirable to take courses without making the above plans. If such a student should decide to become a candidate for an advanced degree, credits will be evaluated by the Graduate Committee. All requirements must be met as outlined in the selected major.

Master of Science degree with a major in Home Economics Education

This program is primarily directed toward the extension of the professional training of home economics teachers. Graduate work in this area is becoming increasingly essential because of present day demands for higher degrees. This program is also designed for those who wish to enter the fields of supervision, administration, or teacher education.

Requirements

A. 20 semester hours selected from the following courses:

			Sem. Hrs.
I.E.	526	Administration Vocational Education	2
Ed.	472	Coordination-Vocational Home Economics	2
Ed.	520	Current Problems in Home Economics	2
Ed.	568	Curriculum Procedures II	2
H.E.	537	Curriculum Procedures III	2
Ed.	441	Education Evaluation	2
Ed.	401	Guidance	2

Ed.	500	Philosophy Modern Education	2
Ed.	402	Philosophy of Voc. & Adult Ed.	2
H.E.	510	Problems in Home Economics Education	2
H.E.	506	Problems in Supervision	2
Ed.	416	Problems Vocational and Adult Homemaking	2
* Ed.	555	Psychology of Learning	2
* Ed.	513	Psychology of Personality & Mental Hygiene	2
H.E.	521	Problems in Vocational Guidance	2
Ed.	501	Research Procedures	2
H.E.	561	Seminar Home Economics Education	1
H.E.	560	Special Problems Home Economics Education	3-6
Ed.	461	Statistics	2
H.E.	533	Survey Procedures	2
Ed.	413	Teaching Vocational and Adult Homemaking	2
H.E.	570	Investigations—Plan (A)	6
Ed.	415	Voc. & Adult Homemaking Ed. Workshop	6
S.S.	417	American Politics	2
S.S.	410	Modern World	4
Ed.	500	Philosophy of Modern Education	2
Ed.	502	Principles of Supervision	2
S.S.	409	Recent History of U. S.	3
Ed.	524	Social Maladjustments	2
Ed.	360	Visual Education	2

B. Ten semester hours selected from graduate college courses in Home Economics approved on the basis of individual needs.

Master of Science degree with a major in Food and Nutrition

This program is designed to increase the professional knowledge and competency of those engaged in the food and nutrition fields. Specialization in these areas may lead to advanced positions in teaching, institution management, dietetics, and nutrition work in schools, public health service, or social welfare organizations. Graduate work in food and nutrition also offers training for students interested in preparing for positions in food demonstration, research, home service, and a wide range of home economics positions in business.

Requirements

A. 20 semester hours in foods, nutrition, and dietetics, and institution management.

1. A minimum of 9 hours in foods, nutrition, and dietetics selected with the approval of the adviser from the following courses:

			Sem. Hrs.
H.E.	310	Nutrition and Dietetics	3
H.E.	501	Trends in Nutrition	2
H.E.	400	Food Demonstration	2
H.E.	310	Nutrition and Dietetics	3
H.E.	418	Diet in Disease	3
H.E.	438	Experimental	3
H.E.	446	Food Preservation	2
H.E.	556	Advanced Experimental	3
H.E.	508	Food Seminar	2
H.E.	511	Nutrition Seminar	2
H.E.	545	Workshop in Foods	3
H.E.	510	Problems in Home Economics	2

2. A minimum of 5 hours in Institution Administration selected, with the approval of the adviser from the following courses:

			Sem. Hrs.
H.E.	300	Applied Institution Management	3
H.E.	328	Institution Administration	3
H.E.	443	School Food Service	3
H.E.	452	Institution Food Preparation	3
H.E.	513	Institution Management Seminar	2

B. Eight semester hours selected with the approval of the adviser, from one of the following areas or a combination of these areas:
Home Economics Education
Clothing, Textiles, and Related Arts
Family Life
Related Science
(Ed. 501 Research Procedures—2 semester hours)

Master of Science degree with a major in Clothing, Textiles and Related Art

The fifth year curriculum in clothing, textiles, and related art is planned to meet the needs of students whose work necessitates thorough acquaintance with the subject matter in these areas, as teachers, supervisors, extension workers and educational advisers in the commercial clothing field. This curriculum also provides opportunity for enrichment of cultural background and for greater appreciation of creative design.

Requirements

A. 20 semester hours in clothing, textiles and related art.

1. A minimum of 9 hours in clothing and textiles selected, with the approval of the adviser from the following courses:

			Sem. Hrs.
H.E.	316	Clothing Economics	2
H.E.	412	Applied Dress Design	3
H.E.	414	Children's Clothing	2
H.E.	471	History of Costume	2
H.E.	472	Advanced Textiles	2
H.E.	500	Tailoring	3
H.E.	514	Seminar in Clothing	2
H.E.	510	Problems in Home Economics	2
H.E.	544	Workshop in Clothing	2

2. A minimum of 5 hours in related art selected, with the approval of the adviser, from the following courses:

			Sem. Hrs.
Art	323	Problems in House Furnishing	3
Art	332	Advanced Design	3
Art	430	Art History	2
Art	436	Costume Design	2
Art	460	Creative Arts	3
Art	526	Seminar in Related Art	2

B. 8 semester hours selected, with the approval of the adviser, from one of the following areas or a combination of these areas:
Home Economics Education
Food and Nutrition
Family Life
Related Science
(Ed. 501 Research Procedures—2 semester hours)

GRADUATE TUITION AND FEES

Graduate students will pay tuition fees per semester according to the following plan:

Students taking graduate courses only:

Health Service Fee	$ 2.50
Activities Fee	9.00
* Nonresident Tuition	62.00
Grad. Course Fees (per credit)	3.00

Students taking both graduate and undergraduate courses (split-program):

Health Service Fee	2.50
Activities Fee	9.00
* Nonresident Tuition	62.00
General Fee	30.00
Grad. Course Fees (per credit)	3.00

* Out of state only

SUMMER SESSION 1948

The 43rd annual summer session of The Stout Institute will be held during the summer of 1948, opening June 21st. The session will be six weeks in length. The large majority of the courses will be on the six weeks basis. There will be some courses available in three week units. Courses are arranged in the schedule to permit the maximum flexibility in combinations to meet current educational needs. The summer session bulletin issued in April gives full information on courses and schedule.

Summer session classes are designed to meet the needs of various groups of people. Former students and graduates have an excellent opportunity for taking advanced work. Both graduate and undergraduate work will be offered. Supervisors and teachers of industrial education or home economics can strengthen their work in techniques or in the field of education. All persons interested in specific studies related to work in industrial or homemaking courses will find much of interest in the summer session schedule. The Wisconsin State Board of Vocational and Adult Education through the use of federal teacher training funds is cooperating with the Stout Institute in the preparation of teachers for schools of vocational and adult education. The summer session schedule carries an excellent range of courses required for vocational classification.

Refresher and supplementary courses are planned for teachers meeting new responsibilities in new fields of work and for men and women with practical experience who desire teacher training. Several educational workshops will be included in the summer program. These afford opportunity for individual and group work. Practical solutions of current problems are planned in terms of immediate requirements and for new adaptations and developments.

Special lectures and conferences are included in the summer session program. It has been the policy of the college to secure special speakers particularly well qualified to handle the larger social problems of the present time. Special emphasis is given to the relationships and responsibilities which home economics and industrial education teachers have in the solution of these problems.

Credit granted for courses taken during the summer session will apply on course requirements where such courses are in the curriculum leading to the degree. The time assigned to summer session courses is increased in sufficient amount to permit students to carry the courses for the same credit as in the regular session.

Teachers whose work remaining for the degree is in an amount too large to be conveniently completed through summer sessions are advised to use one or two semesters of attendance in addition to summer session attendance. In the preparation of the summer program certain courses are offered every summer while others are alternated. Students planning to attend several summer sessions should consult advisers at the time of registration. Opportunity is offered in various courses to meet the rapid changing requirements in teaching positions.

During the last several summer sessions there has been a very marked trend toward use of the summer session as an extension opportunity for teachers in service. In the 1948 summer session flexibility in the

combinations of courses will be planned to meet the varying needs on the part of teachers as they meet the new responsibilities of the present times.

The April issue of The Stout Institute Bulletin is the annual summer session bulletin. This contains general information on the summer session, descriptions of courses, and the summer session class schedule including both undergraduate and graduate work. It will be sent on request.

COURSES OF STUDY

Industrial Education

The four-year curriculum in the division of Industrial Education at The Stout Institute leads to a degree of Bachelor of Science with a major in Industrial Education or Vocational Education and the special state license.

Supplementary licenses to teach additional subjects are based on the electives selected. The general purpose of this curriculum is to provide a balanced educational development. This balanced development is brought about through closely integrated courses in sequenced progression within the several subject groups in technical work, in English, social science, science, mathematics, education, and physical education. The specific purpose in the curriculum is to prepare the students for the requirements of the industrial education teaching and supervisory positions in elementary schools, junior high schools, senior high schools, vocational schools, junior colleges, and technical institutions. Through controlled choices in the technical and educational sequences, provision is made for licensing or certificating requirements of state departments of education. Through carefully balanced sequenced progression in academic courses, a basic preparation is provided for continued professional study.

The first and second years are general preparation. Students are required to take a range of work indicated in these years in the technical and other sequences. The basic exploratory range of industrial work required in the first year is supplemented by controlled choices in the second year which continue the development of a broad general foundation in this sequence.

For those students who are not journeymen or who have less than four years of apprenticeship and three years of journeyman experience in the trade, the major in industrial education is open to them. For those who have the trade experience and who are eligible for classification as vocational teachers, either the major in industrial education or the major in vocational trade and industrial education may be selected.

The tabulated material immediately following indicates the curriculum definitions for the major in industrial education. Following this information is the statement indicating the modifications in the industrial education curriculum for those who are eligible for the curriculum with the vocational trade and industrial major.

CURRICULUM IN INDUSTRIAL EDUCATION

FIRST YEAR

			Sem. Hrs.
English	102a-b	English Composition	6
English	106	Speech I	2
Mathematics	209	College Algebra	4
Hygiene	101	Hygiene	1
Education	123	General Psychology	3
Ind. Education	(See List)	Shop, Drawing, Design	16
Physical Education	127	Physical Education	0

The 16 hours of shop work and drawing in the first year consist of eight courses in the following:

IE 107	Hand Woodwork	IE 117	Printing
IE 131	Machine Woodwork	IE 119	Electrical
IE 115	Sheet Metal	IE 118	Freehand Drawing
IE 113	Machine Shop	IE 121	Ele. of Mech. Drawing

The shop work and drawing in the first year is required of all students. Recognition of incidental experiences by the students in the field of work covered by any of the courses in this group is made individually. For those entering with specific journeyman experience in trades, the freshman schedule is modified.

SECOND YEAR

			Sem. Hrs.
Chemistry	115	Inorganic Chemistry	5
Mathematics	213	Trigonometry	3
Social Science	309	Sociology	3
Education	222	Principles of Sec. Education	2
Education	303	Educational Psychology	2
Education	234	Activity Analysis	2
Education	236	Course Construction	2
Education	228	Business Management in Industrial Education	2
Ind. Education	(See List)	Shop, Drawing, Design	10

The 10 semester hours of shop and drawing in the second year will be selected as follows:

Three courses selected from the following in terms of the student's fields of concentration in technical work.

IE 226	General Drawing	IE 363	General Graphic Arts
IE 335	General Metal	IE 209	General Finishing
IE 116	General Woodwork	IE 369	Gen. Industrial Mechanics
IE 253	General Mechanics	IE 242	General Motor Mechanics

Two additional courses from general list in terms of fields of concentration in technical work.

The selection of technical courses in shop work, drawing, and design in the second, third, and fourth years is based upon continuous survey studies. The choices in the second year continue the exploratory range begun in the first year and include instructional experiences in typical general shops. These are selected in terms of the fields of concentration which the individual student plans to develop in his technical work. The selections of technical courses in the third and fourth year are based upon the experiences of the student in the first and second years, a detailed study of the trends in educational requirements as evidenced in the distribution in calls for teachers, and continuous studies of change in modern industry. The implications of the results of these studies are used in teacher training to meet the requirements for general education and for vocational education. Selections of courses are combinations made from the following:

Aircraft Construction	Furniture Upholstery
Carpentry	General Woodwork
Cabinetmaking	Freehand Drawing
Patternmaking	Machine Drawing
Woodturning	General Drawing
Mechanical Drawing	Architectural Drawing
General Mechanics	Aircraft Drawing
General Industrial Mechanics	Foundry
Industrial Mechanics	General Metal
General Motor Mechanics	General Graphic Arts
Auto Mechanics	Printing
General Finishing	Masonry
Painting and Decorating	General Building Construction
Oxy-acetylene & Electric Welding	House Furnishing
Sheet Metal	Electrical Work
Machine Shop	Radio

Those who wish technical courses in shopwork, drawing, or design for preparation for technical or junior executive positions in industry or positions in industrial training departments will find selections from the technical and education courses particularly applicable.

Those who desire to take special selections of work in English, Mathematics, Science, Social Science, or Education for the purpose of transferring these credits to other colleges to apply on other curricula will find advantageous combinations of work for as much as two years of attendance.

THIRD YEAR

			Sem. Hrs.
English	346	Expository Writing	3
English	223	Speech II	2
Physics	421	Physics I	5
Social Science	201	Economics	3
Academic Electives			5
Education	205	Methods of Teaching Ind. Arts	2
Education	408b	Student Teaching	2
Education	357	Educational Organization	2
Education Electives			2
Ind. Education	(See List)	Shop, Drawing, Design	6

FOURTH YEAR

			Sem. Hrs.
Social Science	311	Government	3
Additional Science			3
Additional Social Science			4
Academic Electives			5
Education	408c	Student Teaching	2
Education	441	Educational Evaluation	2
Education	401	Guidance	2
Education Electives			2
Ind. Education	(See List)	Shop, Drawing, Design	10

Electives

Supplementary licenses to teach subjects in addition to industrial subjects are based on electives selected. In addition to the major in industrial education, students are required to arrange their selections of electives to complete two academic minors. Fifteen semester hours of work in a given subject matter field constitute a minor.

Education Electives			Sem. Hrs.
Ed.	350	Adolescent Psychology	2
Ed.	352	Child Psychology	2

Ed.	447	Psychology of Personality & Mental Hygiene	2
Ed.	449	Psychology of Counseling & Guidance	2
Ed.	360	Audio-Visual Education	2
* Ed.	402	Philosophy of Vocational and Adult Education	2
Ed.	461	Educational Statistics	2
Ed.	459	Curriculum Procedures I (Graphic Analysis)	2
Ed.	472	Coordination	2
Ed.	480	Theory & Organization of the General Shop	2
* Ed.	407	Teaching Trade & Industrial Subjects	2
* Ed.	443	Problems in Teaching Trade and Industrial Subjects	2

(*See Wisconsin State Board of Vocational and Adult Educational classification requirements.)

General Electives

English

Students desiring to complete an English minor should select courses from the following group in sufficient amount to complete fifteen semester hours in English, counting English courses included in the required group.

E 306 Journalism	2
E 410 Writing and Selling Feature Articles	2
E 216 Survey of English Literature	2
E 348 Survey of American Literature	2
E 402 Fiction	2
E 404 Poetry	2
E 406 Drama	2
E 444 Play Production	2
E 320 Speech III	2

History and Social Science

Students desiring to complete a social science minor should select courses from the following group in sufficient amount to complete fifteen semester hours in social science, counting social science courses included in the required groups.

SS 301 Economic History of the United States	3
SS 407 History of the Americas	4
SS 409 Recent History of the U. S.	2
SS 410 Modern World	4
SS 411 Social Problems	2
SS 414 Labor Problems	3
SS 417 American Politics	2

Science

Students desiring to complete a science minor should select from the following group in sufficient amount to complete fifteen semester hours in science, counting science courses included in the required group.

Biol. 122 General Biology	3
Biol. 214 Physiology and Anatomy	5
Bact. 206 General Bacteriology	3
Biol. 316 Zoology	3
Biol. 432 Heredity and Eugenics	2 or 3
Biol. 442 Community Hygiene	2 or 3
Chem. 208 Organic Chemistry	4

Chem. 445 Chemistry of Materials	3
Phys. 423 Physics II	3
Phys. 425 Physics III	3
Phys. 427 Physics IV Electronics	3

Mathematics

Students desiring to complete a mathematics minor should select courses from the following group in sufficient amount to complete fifteen semester hours in mathematics, counting mathematics courses included in the required groups.

Math. 216 College Geometry	2
Math. 220 Spherical Trigonometry	2
Math. 314 Analytic Geometry	2
Math. 315 Calculus	4

Music

A maximum of two semester hours of music may be included in the academic electives to count toward graduation requirements.

Music 150 Solfeggio	1
Music 151 Harmony 1a	1
Music 152 Harmony 1b	1
Music 153 Introduction To and Appreciation of Music	1
Music 160 Theory	1
Music 162 Conducting	1
Music 164 Men's Glee Club	1
Music 166 The College Band	1
Music 167 The College Orchestra	1

Coaching

Techniques of Coaching Football	1½
Techniques of Coaching Basketball	1½

COOPERATIVE WORK

All students in the division of Industrial Education select certain concentrations of work in their technical sequence in shop work, drawing, and design. From time to time opportunities are available for advanced students to spend some time in certain selected industrial establishments securing practical production experience. Regular production experience is available on the campus in certain areas of work. Constant effort is maintained to keep such opportunities available in establishments representing the various content areas included in the technical sequence. The purpose of such work is to give the students modern industrial experience to extend the training experiences secured on the campus. For students who come to The Stout Institute after having already attained sufficient journeyman experience in a trade, the opportunities for the vocational major are available.

VOCATIONAL TRADE AND INDUSTRIAL EDUCATION MAJOR

The 1939 Wisconsin legislature enacted legislation which makes possible the offering of curricula leading to the degree of Bachelor of Science and the degree of Master of Science with a major in Vocational Education. This major on both the undergraduate and graduate level is in addition to the majors in Home Economics and Industrial Education already available on the undergraduate and graduate levels.

In the curriculum for the degree of Bachelor of Science with a major in Vocational Education those applying for the major must be

eligible for vocational teaching classification upon graduation. Ordinarily this classification is based upon certain definitions of practical experience. Candidates who are not eligible for vocational classification upon graduation will not be eligible for the curriculum leading to the vocational major.

(Note: For curriculum requirements for the vocational major on the graduate level, see material elsewhere in this bulletin on Graduate Program.)

The proportioning and distribution of academic, education, and technical courses for the undergraduate vocational major will be similar to the proportioning in the undergraduate programs in the Industrial Education and Home Economics divisions. The vocational education classification courses will be recommended. Where necessary these courses will be used in substitution for courses now in the education sequence.

The courses referred to as classification courses are as follows:

For All

Philosophy of Vocational and Adult Education	2
Vocational Guidance	2
Educational Psychology	2
Elementary Economics	2
Socio-Economics Electives	4
Teaching Trade and Industrial Subjects	2
Problems in Teaching Trade and Industrial Subjects	2

(For detailed information, see Teacher Training Series Bulletins, Wisconsin State Board of Vocational and Adult Education.)

Trade experience credit examinations will be arranged to permit candidates for the undergraduate trade and industrial vocational major to earn through examinations up to a maximum of twenty-four semester hours of credit in the total required for the degree of Bachelor of Science. This credit will be available in six semester hour amounts at certain stated periods in the student's progress through the other credits earned through residence work. In the schedule listed below the plan and the rate at which the twenty-four semester hours of trade examination credit become available is indicated.

Trade and Industrial Education Vocational Major

128 Semester Hours

When 32 sem. hrs. residence completed.	6 sem. hrs. credit on occupational experience examination released
When 32 sem. hrs. (Additional)	6 sem. hrs. (Additional)
When 32 sem. hrs. (Additional)	6 sem. hrs. (Additional)
When 8 sem. hrs. (Additional)	6 sem. hrs. (Additional)
104 sem. hrs.	24 sem. hrs.

The credit and grade point requirements for the residence work will be the same as those for the industrial major. For graduation it will be necessary for the students to have as many grade points as semester hours in residence credit.

In this program of examinations based upon occupational experience, use will be made of advisory committees to assist The Stout Institute in the formulation and conducting of examinations. Agencies to be represented in these advisory examining committees will include the State Board of Vocational and Adult Education, employers in the occupation in which the candidate is being examined, employees in the occupation, and The Stout Institute. The examinations will be conducted at The Stout Institute and will include oral, written and performance sections.

The occupational experience examination is an optional channel for use by undergraduate vocational major students.

Alternatives are as follows:

Using Vocational Major Examination

Candidates who desire to use the channel of the vocational major examination must have completed apprenticeship and three years of successful journeyman occupational experience. In some instances these requirements will not have been completed at the time the student starts his attendance at The Stout Institute. In such cases the student must have completed these requirements at the time he has completed his residence work for the degree.

Vocational Major Program Without Major Examination

Students who have a major concentration in a technical area in the regular industrial education curriculum may present this as an equivalent of apprenticeship. In addition to the completion of the four year curriculum with the above concentration, a minimum of one and one-half years of occupational experience in the same technical area on the adult or journeyman level is required initially with an additional one and one-half years to be gained subsequently.

In conducting these examinations, as a general rule, the major portion of the written and performance parts of the examination will be completed before the committee meets at The Stout Institute. At the time of the committee meeting the oral examinations will be conducted and the checking and evaluating of the results of the written and performance parts of the examination will be completed. This plan will, however, be subject to modifications when necessary. Candidates will be required to meet a reasonable fee charge for the examination, such fee to be used in meeting the expense in connection with the examination.

The work outlined for the curriculum for the vocational major is closely articulated with classification requirements of the Wisconsin State Board of Vocational and Adult Education.

WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION CLASSIFICATION REQUIREMENTS

Under section 41.15 (6) of the Wisconsin Statutes the State Board of Vocational and Adult Education has set up certain standards of practical occupational experience, teaching experience in schools of vocational and adult education, general educational training, and specific professional preparation for teachers in the Wisconsin schools of vocational and adult education and is classifying such teachers on the basis of these standards.

Teachers of Trade and Industrial Subjects
Junior Classification

Junior Classification is granted to and held by:

A. All teachers of trade and industrial subjects in the Wisconsin schools of vocational and adult education employed—

Outside of Milwaukee prior to January 1, 1926.

In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. If not already with a record of practical experience in the vocation taught for at least three years beyond the completion of ap-

prenticeship, or the equivalent experience, spend one summer, or the equivalent, during each three year period in practical work in the trade or occupation indicated until such record shall total three full years.

3. Have agreed to and actually do spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each three year period. The following courses must be taken first:
   Philosophy of Vocational and Adult Education ..... 2 credits
   Teaching Trade and Industrial Subjects ..... 2 credits
   Note: Three year periods mentioned above are those ending as of August 31, 1950—1953—1956—etc.

A. All teachers of trade and industrial subjects in the Wisconsin schools of vocational and adult education employed—
   Outside of Milwaukee prior to January 1, 1926.
   In Milwaukee on or after March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. Have had practical experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience. Or have had practical experience, in the vocation taught for at least one and a half years beyond the completion of apprenticeship, or the equivalent experience, and have agreed to and actually do spend one summer, or the equivalent, during each two year period in practical work in the trade or occupation indicated until such record shall total three full years.
3. Have agreed to and actually do spend one summer, or the equivalent, during each two year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each two year period. The following courses must be taken first:
   Philosophy of Vocational and Adult Education ..... 2 credits
   Teaching Trade and Industrial Subjects ..... 2 credits
   Note: Two year periods mentioned above are those ending with the second August 31st after the teacher enters upon his work in the school of vocational and adult education and all subsequent two year periods.

Senior B Classification

Senior B Classification is granted to all teachers of trade and industrial subjects in the Wisconsin schools of vocational and adult education employed—
   Outside of Milwaukee prior to January 1, 1926.
   In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold Senior A Classification.
2. Have completed five years of successful teaching of the trade and industrial subject indicated in the Wisconsin schools of vocational and adult education.
3. Have completed one summer, or the equivalent in professional improvement. At least six credits must be earned, including the following courses:
   Philosophy of Vocational and Adult Education ..... 2 credits
   Teaching Trade and Industrial Subjects ..... 2 credits

Senior B Classification will be extended as long as the possessor:

1. Teaches the trade and industrial subject indicated successfully in the Wisconsin schools of vocational and adult education.

2. If not already with a record of practical experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience, spends one summer, or the equivalent, during each three year period in practical work in the trade or occupation indicated until such record shall total three full years.
3. Have agreed to and actually do spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each three year period. The following courses must be taken first:
   Philosophy of Vocational and Adult Education ..... 2 credits
   Teaching Trade and Industrial Subjects ..... 2 credits
   Note: Three year periods mentioned above are those ending as of August 31, 1950—1953—1956—etc.

Senior A Classification

Senior A Classification is granted to and held by all teachers of trade and industrial subjects who meet the following requirements:

1. Practical experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience.
2. Successful teaching experience of the trade and industrial subject indicated for not less than three full years in schools of vocational and adult education; one of these three years must be in Wisconsin.
3. Completion of two years of college work in an approved teacher training institution, or the equivalent training.
   Note: Time spent by a person without practical experience in a trade school or technical school learning elementary processes, if applied on the apprenticeship period mentioned above, cannot be counted here. This two years of school training is to be in addition to the learning of the elementary trade or industrial processes.
4. Completion of the following courses, which may be included in the two years of college training required (under 3) above, or the equivalent specific training.
   (1) Philosophy of Vocational and Adult Education .... 2 credits
   (2) Teaching Trade and Industrial Subjects..... 2 credits
   (3) Educational Psychology ..... 2 credits
   (4) Vocational Guidance ..... 2 credits
   * (5) Problems in Teaching Trade and Industrial Sub. 2 credits
   (6) Elementary Economics ..... 4 credits
   (7) Socio-economic Electives ..... 4 credits
   * This course cannot be taken for classification credit until the teacher has a record of three years experience in schools of vocational and adult education.
   Note: Four credits of graduate work done by a candidate for a higher degree is accepted in lieu of the six credits total required throughout these standards.

Unclassified

All teachers of trade and industrial subjects who do not have the qualifications for any of the ranks of classification as herein set up shall be designated as Unclassified.

Home Economics

The field of Home Economics is concerned with problems of home and family life and its studies are based upon an understanding of the biological, and physical sciences and the humanities. This curriculum at The Stout Institute has been developed through the cooperative thinking and selection by faculty and students of four areas of experience needed in modern living. In each of the four years, one of these areas has been chosen as a basis for achieving the desired goals. The area of personal development is the center of interest for the freshman year, that of family relationships the determining factor for the sophomore year, social-civic relations for the junior year, and professional relations for the senior year of work. Although the cumulative development of each year relates more to the one area than to the others, giving a unity of experiences, the interdependence of all areas is also emphasized. The experiences through which the students attack their problems vary with circumstances and with the needs of the particular person.

The offerings in the Division of Home Economics are planned to meet student needs in family and community living and to offer a worthwhile training in the many professional fields open to home economists. Graduates of this college are prepared to fill positions in the teaching field, in hospital dietetics, institution management, commercial demonstration work, in Agriculture Extension Service, and a wide range of home economics positions in business.

The curriculum in this division meets the requirements for the degree of Bachelor of Science in Home Economics. It also permits the meeting of requirements for teachers' licenses and the certification by the American Dietetics Association for dietetians and employees in institutions. Students may complete requirements for graduation through choice in Home Economics Education, Dietetics, Institution Management, or a General Home Economics sequence of courses. In the latter group special selections may be made in Foods, Clothing, or Child Development.

CURRICULUM IN HOME ECONOMICS

First Year

	Sem. Hrs.
English 102a-b—English Composition	6
English 106—Speech I	2
Biology 214—Physiology and Anatomy	5
Education 123—General Psychology	3
Home Economics 116—Personal Development	2
Home Economics 102—Clothing	3
Home Economics 112—Principles of Nutrition	2
Home Economics 114—Food Preparation	2
Art 106—Fundamentals of Design	3
Art 220—Clothing Selection	2
Physical Education 128	0

Second Year

English 216—Survey of English Literature	2
Chemistry 115—Inorganic	5
Chemistry 208—Organic	4
Social Science 309—Sociology	3
Home Economics 212—Family Nutrition	3
Home Economics 230—Foods	3
Home Economics 224—Growth and Development of The Child	2

Home Economics 315—Textiles	3
Home Economics 218—Clothing Construction	3
Art 334—House Furnishing	3
Physical Education 228	0

Note: 1. Chemistry 208 must precede or parallel Home Economics 212.
2. Home Economics Education students should register in Education 222 during the second semester of the Sophmore year or first semester of the Junior year.
3. Dietetics students will schedule Bact. 206 and need not schedule Art 334, HE 315, HE 218 unless desired.
4. Institution Management students will schedule Bact. 206 and need not schedule Art 334, HE 218 unless desired.

Home Economics Education

Third Year

English 346—Expository Writing	3
Social Science 201—Economics	3
Social Science 326—Problems of Family	3
Education 320—Principles and Procedures of Teaching Home Economics in Secondary Schools	3
Home Economics 317—Consumer Information	3
Home Economics 308—Meal Management	3
Education 303—Educational Psychology	2
Education 402—Philosophy Voc. & Adult Education	2
Education 401—Voc. Educ. Guidance	2
Electives	6

Fourth Year

Biology 442—Community Hygiene	2-3
Social Science 410—Modern World	4
or	
Social Science 407—History of America	4
or	
Social Science 311—Government	3
Home Economics 403—Home Management	3
Education 410—Equipping and Managing a Homemaking Dept.	3
Education 408—Student Teaching	6
Home Economics 424—Princ. & Practices of Child Guidance	2
Education 441—Educational Measurements	2
Education 413—Teaching Vocational & Adult Homemaking	2
Elective	5-6

Note: Home Economics Education students interested in teaching positions in George Deen, George Barden, or City Vocational Schools should elect Ed. 402 and Ed. 413.

Dietetics

Third Year

Chemistry 322—Biochemistry	3
Biology 362—Advanced Physiology	3
Education 303—Educational Psychology	2
Social Science 201—Economics	3
Home Economics 308—Meal Management	3
Home Economics 310—Nutrition and Dietetics	3
Home Economics 452—Institution Food Preparation	3

Electives
Home Economics 4-6
Academic 4-6

Fourth Year

Social Science 326—Problems of Family 3
Education 320—Principles and Procedures of Teaching Home Economics in Secondary Schools 3
Home Economics 328—Institution Administration 3
Home Economics 418—Diet in Disease 3
Home Economics 403—Home Management 3
Home Economics 438—Experimental Foods 3

Electives
Home Economics 4-7
Academic 4-7

Note: Dietitian interested in administrative work should elect Social Science 414 and Home Economics 463 and Home Economics 317.

Institution Management

Third Year

Social Science 201—Economics 3
Social Science 326—Problems of Family 3
Education 303—Educational Psychology 2
Home Economics 300—Applied Institution Management 3
Home Economics 308—Meal Management 3
Home Economics 317—Consumer Information 3
Home Economics 403—Home Management 3
Home Economics 452—Institution Food Preparation 3

Electives
Home Economics 2-6
Academic 2-6

Fourth Year

Biology 442—Community Hygiene 2-3
Social Science 414—Labor Problems 3
Education 320—Principles and Procedures of Teaching Home Economics in Secondary Schools 3
Home Economics 328—Institution Administration 3
Home Economics 463—Institution Management Problems 3
Home Economics 438—Experimental Foods 3

Electives
Home Economics 2-8
Academic 2-8

Note: Institution Management students interested in administrative internships should elect Chemistry 322 and Home Economics 310.

General Home Economics

Third Year

English 346—Expository Writing 2-3
Social Science 201—Economics 3
Home Economics 308—Meal Management 3
Home Economics 317—Consumer's Information 3
Art 206—Art Appreciation 2

Choice:
Foods — Home Economics 438—Experimental Foods 3
Home Economics 400—Food Demonstrations 2
or
Clothing — Home Economics 322—Textile Problems 2-3
Home Economics 320—Adv. Clothing Const. 2-3
or
Child-Development — Education 352—Child Psychology 2
Home Economics 318—Family Health 2
Education 421—Nursery School Organization 3-4

Electives: (10)
Home Economics 4-6
Academic 4-6

Fourth Year

Home Economics 424—Guid. Pract. PreSchool Child 2
Home Economics 403—Home Management 3
Social Science 326—Problems of Family 3
Social Science 410—Modern World 4
or
Social Science 407—History of Americas 4
or
Social Science 311—Government 3
Biology 442—Community Hygiene 2-3

Choice:
Foods — Home Economics 300—Applied Institution Mgt..... 3
or
Clothing — Home Economics 412—Applied Dress Design 2-3
Home Economics 316—Clothing Economics 2-3
or
Child-Development — Education 408-N.S. Teaching in the N.S. 3-6
Biology 432—Heredity and Eugenics 2-3

Electives (10)
Home Economics 6-8
Academic 4-6

ELECTIVES

In addition to the requirements for a major in Home Economics, students must arrange their choice of electives to complete two academic minors. Fifteen semester hours in courses of a particular subject matter field constitutes a minor.

Students may also choose electives in subject matter fields of their special interests and needs, to complete the total number of hours required.

Education	**Sem. Hrs.**
Education 350—Adolescent Psychology	2
Education 352—Child Psychology	2
Education 447—Psychology of Personality and Mental Hygiene	2
Education 449—Psychology of Counseling and Guidance	2
Education 441—Educational Measurements	2
Education 461—Statistics	2
Education 360—Visual Education	2

Education 401—Vocational and Educational Guidance 2
Education 402—Philosophy of Vocational and Adult Education 2
Education 413—Vocational and Adult Homemaking 2
Education 416—Problems in Teaching Vocational and Adult Homemaking 2

English

English 406—Drama 2
English 402—Fiction 2
English 444—Play Production 2
English 404—Poetry 2
English 223—Speech II 2
English 348—Survey of American Literature 2
English 320—Speech III 2

Science

Bacteriology 206—General Bacteriology 3
Chemistry 322—Biochemistry 3
Biology 122—General Biology 3
Biology 362—Advanced Physiology 2-3
Biology 442—Community Hygiene 2-3
Biology 432—Heredity and Eugenics 2-3
Physics 421—Physics I 5
Physics 423—Physics II 3
Biology 316—Zoology 2

Social Studies

Social Science 417—American Politics 2-3
Social Science 301—Economic History of the U. S. 3
Social Science 311—Government 3
Social Science 407—History of the Americas 4
Social Science 414—Labor Movements 3
Social Science 410—Modern World 4
Social Science 215—Origins and History of World War II 2-3
Social Science 409—Recent U. S. History 3
Social Science 411—Social Problems 2-3

Music

(Maximum of two semester hours may be included in academic electives to count toward graduation.)

Music 150—Solfeggio 1
Music 151—Harmony Ia 1
Music 152—Harmony Ib 1
Music 153—Introduction to and Appreciation of Music 1
Music 160—Theory 1
Music 162—Conducting 1
Music 165—Women's Glee Club 1
Music 166—Band 1
Music 167—Orchestra 1

Home Economics

Art 206—Art Appreciation 2
Art 430—Art History 2
Art 332—Advanced Design 2
Art 400—Crafts 2
Art 460—Creative Arts 3
Art 323—Problems in House Furnishing 2
Art 446—Sketch 1
Art 436—Costume Design 2

Art 410—Pottery 2
Home Economics 244—Weaving 2
Home Economics 438—Experimental Foods 3
Home Economics 400—Food Demonstrations 2
Home Economics 300—Applied Institution Management 3
Home Economics 452—Institution Foods 3
Home Economics 328—Institution Administration 3
Home Economics 310—Nutrition and Dietetics 3
Home Economics 333—Household Equipment 2
Home Economics 352—Housing 2
Home Economics 318—Family Health 2
Home Economics 412—Applied Dress Design 3
Home Economics 414—Children's Clothing 2
Home Economics 316—Clothing Economics 2
Home Economics 320—Advanced Clothing Construction 3
Home Economics 336—Clothing Problems 2
Home Economics 471—History of Costume 2
Home Economics 472—Advanced Textiles 2

Vocational Homemaking Education Major

Women students interested in the vocational education major must be eligible for vocational teaching classification upon graduation.

The distribution of the courses required for a major in this division will be very similar to that in the curriculum of the home economics division. The academic and education courses will be distributed as they are in that curriculum. The vocational courses required will be:

Philosophy of Vocational and Adult Education
Teaching Vocational and Adult Homemaking
Educational Psychology
Vocational Guidance
Problems in Teaching Vocational and Adult Homemaking

Technical courses will be taken from the list required in home economics, such requirements, however, to be modified to fit the particular needs of the individual student.

Credit examinations in technical fields in which the candidate has had teaching or trade experience will be allowed up to a maximum of 24 semester hours. Such credit will be released in units of six semester hours at the completion of each 31 semester hours of resident class work. The method for conducting such examinations will be similar to that set up for the men majoring in the vocational trade and industrial courses. (See Vocational Trade and Industrial Major)

The total amount of credit required for this major will be 124 semester hours, with grade point requirements equalling the semester hours of credit.

WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION CLASSIFICATION REQUIREMENTS

Under section 41.15 (6) of the Wisconsin Statutes the State Board of Vocational and Adult Education has set up certain standards of practical occupational experience, teaching experience in schools of vocational and adult education, general educational training, and specific professional preparation for teachers in the Wisconsin schools of vocational and adult education, and is classifying such teachers on the basis of these standards.

Teachers of Homemaking
Junior Classification

Junior Classification is granted to and held by:

A. All teachers of homemaking in the Wisconsin schools of vocational and adult education employed—
Outside of Milwaukee prior to January 1, 1926
In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. If not already with a record of practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent experience, spend one summer, or the equivalent, during each three year period in practical homemaking until such record shall total twelve months.
3. Have agreed to and actually do spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each three year period. The following courses must be taken first:
Philosophy of Vocational and Adult Education ..... 2 credits
Teaching Vocational and Adult Homemaking ..... 2 credits
Note: Three year periods mentioned above are those ending as of August 31, 1950—1953—1956—etc.

B. All teachers of homemaking in the Wisconsin schools of vocational and adult education employed—
Outside of Milwaukee on or after January 1, 1926
In Milwaukee on or after March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. Have had practical experience in homemaking involving some responsibility for at least twelve months, or the equivalent experience. Or have had such practical homemaking experience for at least six months, or the equivalent experience, and have agreed to and actually do spend one summer, or the equivalent, during each two year period in such practical homemaking until such record shall total twelve full months.
3. Have completed two years of the home economics course in an approved teacher training institution of college rank, or the equivalent training.
4. Have agreed to and actually do spend one summer or the equivalent, during each two year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each two year period. The following courses must be taken first:
Philosophy of Vocational and Adult Education ..... 2 credits
Teaching Vocational and Adult Homemaking .....2 credits
Note: Two year periods mentioned above are those ending with the second August 31st after the teacher enters upon her work in the school of vocational and adult education and all subsequent two year periods.

Senior B Classification

Senior B Classification is granted to all teachers of homemaking in the Wisconsin schools of vocational and adult education employed—
Outside of Milwaukee prior to January 1, 1926
In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold Senior A Classification.

2. Have completed five years of successful teaching of homemaking in the Wisconsin schools of vocational and adult education.
3. Have completed one summer, or the equivalent, in professional improvement. At least six credits must be earned including the following courses:
Philosophy of Vocational and Adult Education ..... 2 credits
Teaching Vocational and Adult Homemaking .....2 credits

Senior B Classification will be extended as long as the possessor:

1. Teaches homemaking successfully in the Wisconsin schools of vocational and adult education.
2. If not already with a record of practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent experience, spends one summer, or the equivalent, during each three year period in practical homemaking until such record shall total twelve full months.
3. Has agreed to and actually does spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification. At least six credits must be earned over each three year period. The following courses must be taken first.
Philosophy of Vocational and Adult Homemaking.... 2 credits
Teaching Vocational and Adult Homemaking..... 2 credits
Note: Three year periods mentioned above are those ending as of August 31, 1950—1953—1956, etc.

Senior A Classification

Senior A Classification is granted to and held by all teachers of homemaking who meet the following requirements:

1. Practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent experience.
Note: Practical experience in homemaking involving some degree of responsibility is considered to be:
a. Experience with entire responsibility for all homemaking activities such as would be the case were the housewife to be away or ill or the mother to die, leaving full responsibility to be assumed by the candidate.
b. Experience as an employee in the home, responsible for certain homemaking activities such as would be the case where the candidate works with and assists the housewife but usually has delegated or assumes responsibilities for definite activities.
2. Occupational experience in fields other than teaching or homemaking for at least three months, or the equivalent experience.
3. Successful teaching experience in homemaking for not less than three full years in schools of vocational and adult education; one of these three years must be in Wisconsin.
4. Completion of a four year college course with a home economics major in an approved teacher training institution, or the equivalent training.
5. Completion of the following courses, which may be included in the four years of college training required (under 4) above, or the equivalent specific training:
(1) Philosophy of Vocational and Adult Education .... 2 credits
(2) Teaching Vocational and Adult Homemaking .... 2 credits

(3) Educational Psychology ..... 2 credits
(4) Vocational Guidance ..... 2 credits
* (5) Problems in Teaching Vocational and Adult Homemaking ..... 2 credits
(6) Elementary Economics ..... 4 credits
(7) Socio-economic Electives ..... 4 credits

* This course cannot be taken for classification credit until the teacher has a record of three years experience in schools of vocational and adult education.

Note: Four credits of graduate work done by a candidate for a higher degree is accepted in lieu of the six credits total required throughout these standards.

Unclassified

All teachers of vocational homemaking who do not have the qualifications for any of the ranks of classification as herein set up shall be designated as Unclassified.

DESCRIPTION OF COURSES

Psychology, Education, Liberal Arts

Courses marked by asterisk (*) are starred courses. For description see material on graduate program elsewhere in this bulletin.

PSYCHOLOGY

Education 123 General Psychology
Scientific vs. unscientific approaches in understanding man. Course treats efficient methods in study, individual differences and their measurement, development of motives, emotions and their dynamics, behavior and personality development attention and thinking. Consideration given to special psychological problems of college and community life.
Sem. I, II. Credit: 3
Iverson

Education 303 Educational Psychology
Prerequisite: Education 123, General Psychology.
A course designed to give the prospective teacher an understanding of and practice in applying the principles of educational psychology. The content covers child and adolescent development, emphasizes learning and its guidance, the individual student, and, the implications of interests and attitudes.
Sem. I, II. Credit: 2
Oetting

Education 350 Adolescent Psychology
Prerequisite: Education 123, General Psychology.
A comprehensive study of adolescent years embracing the physical, emotional, social, moral and intellectual developments of the adolescent. An attempt is made to derive theory from only objectively proven facts and to give much practice in applying it to the practical problems of the home, school, and community.
Sem. II. Credit: 2
Oetting

Education 352 Child Psychology
Prerequisite: General Psychology.
Child Psychology is offered to aid in interpreting and controlling the psychological development of children. Concentration of emphasis will be placed on age groups spanning the nursery school and the pre-pubescent child. Methods for scientific measurement and prediction of child-behavior are included.
Sem. I. Credit: 2
Oetting

Education 449 Psychology of Counseling and Guidance
Prerequisites: Psychology 123, General Psychology or equivalent.
The technique of selecting ultimate aims in life and directing individuals into proper channels. Course involves predicting and controlling behavior of self and others, precise methods of trait measurement and modern procedures for capitalizing upon one's potentialities. Supervised practice in counseling and guidance is offered, with special emphasis on methods of creating friendly cooperation between the counselor and the counselee.
SS Credit: 2
Oetting

Education 513 Personality and Mental Health
Prerequisites: Graduate Standing.
A study of the nature of personality and of the conditions which make for its wholesome development and integration. Attention is given to the various means that the teacher and the school employ to bring about this growth through mentally healthy living. Personality inventories and scales are studied and used for self-analysis.
Sem. I, II. Credit: 2
Oetting

* **Education 555 Psychology of Learning**
Prerequisite: Graduate Standing.
A study of the nature and conditions of learning evidenced by laboratory research and supplemented by classroom observation. Every effort is made to bring findings to bear on industrial, vocational, and home economics education.
Sem. I, II. Credit: 2
Oetting

EDUCATION

Education 222 Principles of Secondary Education
Prerequisite: Sophomore Standing.
A survey of the evolution of secondary education, its present status and trends. An evaluation of the school system in terms of the needs of our democratic society so as to stimulate constructive thinking concerning a sound philosophy, organiza-

tional problems, curriculum development and the responsibilities of the individual teacher. Special emphasis is given to the practical arts.
Sem. I, II. Credit: 2
Iverson

Education 360 Audio-Visual Education
Prerequisite: Junior Standing in Education.
Experience in the construction of various training aids including slides, film strips, still pictures, charts, and models. Practice in planning and presenting a lesson utilizing training aids. Proficiency development in operating, adjusting and servicing typical audio-visual equipment. Experience in locating, ordering and handling audio-visual aids. Discussion of administrative problems concerning initiating and operating an audio-visual program in the school.
Sem. I, II. Credit: 2
Barnard

*** Industrial Education 560**
*** Home Economics Educaton 560 Problems in Audio-Visual Education**
Prerequisite: Graduate Standing, Education 360.
Each problem is selected on the basis of the individual's needs and interests, on his previous experience, and on the educational value of the project. A report is required, written in approved form, to cover such details as the purpose of the problem, review of the literature, methods employed, summary, conclusions, and recommendations.
Sem. I, II. Credit: 2 or 3
Barnard

Education 401 Guidance
Prerequisite: Senior undergraduate or graduate standing.
Overview of the needs, problems, procedures and services of a comprehensive guidance program. The course is designed to develop a sympathetic understanding of the broad aspects of guidance as they apply to all teachers. Also, to recognize the distinction between problems which may well be solved by the class room and home room teacher, and those which should be referred to specialists. Emphasis is given to the Individual Inventory, Occupational Information and Training Opportunities, Counseling and Coordination Procedures, Placement and Adjustment, and the Organization and Administration of the Program.
Sem. I, II. Credit: 2
Brown

Education 490 Workshop in Tests and Measurements in Counseling
Prerequisite: Senior undergraduate or graduate standing and teaching experience.
This workshop deals with the use of tests in counseling and is planned specifically for counselors and teachers who have or expect to have counseling responsibilities. The different types of tests such as pencil and paper performance, individual, group, interest, timed and non-timed, aptitude, achievement, and personal inventories, will be studied and sample applications made. Their selection, uses, and interpretation be fully investigated.
SS Credit: 2
Staff

Education 491 Workshop in Occupational Information and Guidance
Prerequisite: Senior undergraduate or graduate standing and teaching experience.
This workshop is planned specifically for counselors and teachers who have or expect to have counseling or guidance responsibility to assist them in developing their guidance program. Topics to be taken up will be: Working Definitions of Individual Pupil Cumulative Records; Counseling, Including Simple Interview, and Techniques, and the setting up of a Guidance program.
SS Credit: 2
Staff

*** Industrial Education 531**
*** Home Economics Education 531 Problems in Vocational Guidance**
Prerequisite: Education 401, Graduate standing.
Identification and analysis of field problems in the area of guidance services. Selection of materials, development of methods, and preparation of the instruments in a term report on the problem or problems of the student's choice.
Sem. I, II. Credit: 2 or 3
Brown

Education 402 Philosophy of Vocational and Adult Education
A general acquaintance course in the philosophy, organization, and administration of vocational and adult education for the out-of-school group. Emphasis is placed upon the history and development of the vocational school in the nation, with special attention given to the Wisconsin plan; federal and state laws affecting vocational needs, interests and abilities: desirable characteristics of the vocational school teacher; coordination; cooperation with the Industrial Commission and the Rehabilitation Division.
Sem. II, and SS Credit: 2
Barnett

Education 470 Conference Leading
Prerequisite: Methods of Teaching Industrial Subjects or equivalent.
Study and practice of the principles and techniques of conference leading as an instructional device in vocational education.
SS Credit: 2
Staff

Education 492 Workshop in Administration in Vocational and Adult Education
Prerequisite: Senior undergraduate or graduate standing and teaching experience.
This workshop is planned for administrators, or people looking forward to such work. Federal, State, and Local relationships will be considered with emphasis on local administration. The following points will be studied: the formulation and execution of policies; preparation, presentation and operation of budget; plans for cooperation with other agencies; operating procedures in the part-time school; state and federal aids and their distribution; the selection, training, and assigning of duties of teachers, supervisors and coordinators; the planning and writing of reports of meetings of Boards, Advisory Committees, and staff; office organization and procedures—records, reports, inventories and accounting.
SS Credit: 2
Staff

Education 441 Education Evaluation
Prerequisites: Education 222 or Education 320.
Study of techniques for writing examinations and performance tests. Characteristics and limitations of different types of test questions. Interpretation of test scores by means of statistical procedures.
Sem. I, II. Credit: 2
Jarvis

Education 461 Educational Statistics
Prerequisite: Senior Standing.
Methods of collecting, recording, evaluating, and interpreting educational data.
Sem. I, II. Credit: 2
Rich, Jarvis

Education 459 Curriculum Procedures I (Graphic Analysis)
Prerequisites: Graduate or advanced undergraduate standing.
Material is developed in graphic analysis form for use in curriculum revision and expansion in general and vocational education. Specific graphic material is prepared using relationships as found in organizations, in typical content, in travel or flow analysis, and in typical index layouts. Current trades and occupations are used for source material in identifying instructional and guidance programs under modern social-economic pressures. Graphic analysis procedures are defined for the continuous identification and interpretation of technological content, of new organization structures and new distributions of functional definitions to keep pace with change in modern occupations.
SS. Credit: 2
Bowman

Education 568 Curriculum Procedures II (Trade and Job Analysis)
Prerequisite: Graduate standing. Not available to persons who have had Education 468 or Education 234.
Study of systems of analysis of occupations for instructional purposes and for personnel work. Project in development of complete analysis of an occupation for instructional use.
Sem. I, II. Credit: 2
Fryklund

*** Industrial Education 537 Curriculum Procedures III (Course Organization)**
Prerequisites: Curriculum Procedures II or permission of the instructor.
The development of understandings of the principles that underlie effective course building are reviewed. It provides experience in actually planning, organizing, and building a course of study. The philosophical, psychological, sociological, and economic determinates of course offerings are reviewed. The selection of aims, subject matter, projects or problems, teaching methods, instructional aids, and tests are studied and applied. Each student is expected to write a course of study in an area of his choice.
Sem. I, II. Credit: 2 or 3
Anderson

Education 472 Coordination
Prerequisites: Graduate or advanced standing.
Elements and principles of coordination in vocational education are studied. History, function, and importance of advisory committees and apprenticeship are reviewed. Occupational information, visitation, counseling, class organization, conference leadership, and evaluation are considered. The work-experience program in general education is also presented.
Sem. I, II. Credit: 2
Anderson

Education 500 Philosophy of Modern Education
Prerequisite: Graduate Standing.
A study of the main schools of educational philosophy and of their influence in contemporary education thought and practice. Points of agreement and of conflict. The comparative approach is used.
Price
Credit: 2

Education 502 Principles of Supervision
Prerequisite: Graduate Standing.
Basic principles, types, functions, organization, and plan of supervision. Interpretation and application of creative supervision plans. Individual and class projects concerned with applied methods of supervision in selected educational areas.
Sem. I, II.
Credit: 2
Wigen

* **Industrial Education 506 Problems of Supervision**
Prerequisite: Principles of Supervision, Education 502.
Interpretation and application of basic principles of supervision. Individual project: selection analysis, interpretation, and application of plans for a selected supervisory activity. The emphasis of this course is the application of scientific methods for solving supervisory problems.
Sem. I, II.
Credit: 2-3
Wigen

* **Industrial Education 533 Survey Procedures**
Prerequisite: Graduate or advanced standing.
Techniques and methods used in conducting a community occupational survey. The need, interpretation, and use of this research is studied. Problems of organization and sponsorship are reviewed. The elements of content, personnel, budget, forms and publication are given rather intensive treatment. A review of the literature and of published reports on community occupational surveys is made.
Sem. I, II.
Credit: 2 or 3
Anderson

Education 501 Research Procedures
Prerequisite: Graduate Standing.
Systematic survey of the basic problems, methods, and tools for scientific studies in education. Designed to enable the student to see educational problems in their relation to each other, and to attack and solve such problems. The course offers a basis for approaching with scientific attitude other graduate courses. Special attention is given to the surveying and setting up of research techniques for problems in industrial arts, home economics and vocational education.
Sem. I, II.
Credit: 2
Anderson

Industrial Education 510 Problems in Industrial Education
Home Economics 510 Problems in Home Economics Education
Prerequisite: Research Procedures, Education 501.
Applied research course—Interpretation and application of research procedures, use of scientific methods for thesis problem, and orientation of student in terms of selected thesis.
Sem. I, II.
Credit: 2
Wigen

Industrial Education 570
Home Economics 570 Investigation—Plan (A)
Prerequisites: Education 501 Research Procedures and I. E. 510. Problems in Industrial Education or H. E. 510, Problems in Home Economics Education.
Independent research on thesis under direction of investigation adviser. Selection of problem, development of outline, review of literature, compilation of bibliography, plan method of attack, conduct research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours credit, for a final total of six.
Sem. I, II
Total Credit: 6
Staff

EDUCATION—HOME ECONOMICS

Education 320 Principles and Procedures of Teaching Home Economics in the Secondary School
Prerequisite: Education 303, or parallel.
Evaluation of the day school program and methods of teaching. Selecting and preparing teaching aids. Observation and participation in high school home economics classes.
Sem. I, II.
Credit: 3
Noble

Education 410 Equipping and Managing a Homemaking Department
Prerequisite: Education 320, 408, or parallel.
Development and application of a philosophy of home economics education. Curriculum planning. Equipping and maintaining a home economics department. School and community relationships.
Sem. I, II.
Credit: 3
Noble

Education 451 Evaluation in Home Economics Education
Prerequisite: Graduate or senior standing.
Criteria, techniques and devices for evaluating the secondary home economics program. Opportunity for developing measuring devices within this area.
SS
Credit: 2

Education 508 Curriculum Studies in Home Economics
Prerequisites: Graduate Standing.
Review of recent educational literature on curriculum planning. Principles of curriculum construction. Evaluation of curriculum practices and techniques. Students may work on their own curriculum problems.
SS
Credit: 2 or 4

Home Economics 544 Workshop in Clothing
Prerequisite: Graduate standing and teaching experience.
Opportunity to do intensive work in some respect of clothing study, working cooperatively in small groups.
SS
Credit: 2

Home Economics 545 Workshop in Foods
Prerequisite: Graduate Standing.
Members of this group are given opportunity to meet their specific needs through individual development of subject matter, evaluation instruments, instructional materials, and demonstration techniques.
SS
Credit: 2 or 4

Education 408 Student Teaching in Home Economics
Prerequisites: Education 320, 441, or parallel.
Supervised observation, participation and the teaching of home economics in the secondary school. Students participate as far as possible in the entire secondary school program. Experience is available in either on or off campus teaching centers.
Sem. I, II.
Credit: 6
Noble, Harper

Education 413 Teaching Vocational and Adult Homemaking
Methods of instruction adapted to meet the needs, interests and abilities of juveniles and adults in vocational schools. Co-curricular activities will be included with emphasis upon club work, home experiences, school lunch programs, guidance, community contacts and summer community programs. Work experiences will be provided to supplement the content of the course wherever there is a worthwhile relationship and it is considered a practical teaching experience for the students in their pre-service training.
Sem. I, II, and SS.
Credit: 2
Barnett

Education 415 Vocational and Adult Homemaking Education Workshop
An educational plan which provides opportunity for teachers, coordinators, and local supervisors of homemaking, to obtain needed information in solving vocational problems related to specific school and community situations. Emphasis may be placed upon: developing a method of procedure and teaching aids suitable to use in local teacher training of the part-time evening school teachers; constructing a plan and teaching materials applicable to instruction of returned service men and women desiring technical skill in the arts of homemaking; organizing a guide and educational materials appropriate for the contribution of service to the State and local Family-Life program. The keynote of the workshop will be flexibility, active interchange of ideas, attention to individual and group needs with democratic sharing of responsibilities in working out helpful materials for use in vocational schools.
SS
Credit: 2 or 4
Barnett

Education 416 Problems in Teaching Vocational and Adult Homemaking
Prerequisites: Education 402, Philosophy of Vocational and Adult Education 413, Teaching Vocational and Adult Homemaking. Completion of a four year college course in home economics. Three years of teaching experience in a vocational school.
This course is a specific requirement for teacher classification by the State Board of Vocational and Adult Education, intended for homemaking teachers in the vocational schools of the state. Problems of special difficulty common to experienced teachers in this field will be analyzed and solutions suggested based upon statement of facts, the drawing out of controversial viewpoints, the facing of issues with their resulting consequences, the making of tentative decisions and the developing of possible procedures of action for each of the problems presented within the group.
SS
Credit: 2
Barnett

EDUCATION—INDUSTRIAL EDUCATION

Education 228 Business Management in Industrial Education
The function of business administration and management in teaching and supervision of shop work; departmental and room planning; building standards and utilization; selection, care, and arrangement of supplies and equipment; budgets and records; purchasing and inventory control; evaluation procedures.
Sem. I, II.
Credit: 2
Chinnock

Education 234 Activity Analysis
Prerequisite: Sophomore Standing.
Development of an orderly procedure for the identification of instructional units and projects to be used for teaching purposes. Development of outlines for writing instruction sheets and the teaching of each unit.
Sem. I, II. Credit: 2
Jarvis

Education 235 Trade Analysis
For vocational majors. May be substituted for Education 234 in the curriculum. Techniques of analyzing occupations into instructional units for vocational teaching.
Jarvis Credit: 2

Education 236 Course Construction
Prerequisite: Education 234, Activity Analysis.
Planning, organizing and building courses of study. Content derived from activity analysis. Aims, reference materials, suggested projects, teaching methods, instructional aids and evaluation are included.
Sem. I, II. Credit: 2
Jarvis

Education 305 Methods of Teaching Industrial Arts
Study of various methods of presenting lessons according to objectives: visual aids; lesson plans; instruction sheets, as well as oral instruction are included. Directed observation of representative school shops.
Sem. I, II. Credit: 2
Chinnock

Education 357 Educational Organization
Prerequisite: Junior standing in education sequence.
Definition of teacher's professional skill in analysis, selection, and teaching on the lesson, subject and curriculum levels with solutions of typical problems. Administrative practice analyzed in functional assignment of school operating responsibilty; measurement of teaching and supervisory staffs; continuous survey; financial control; and maintaining and controlling of buildings and equipment.
Sem. I, II. Credit: 2
Bowman

Education 408b Student Teaching (Industrial Education)
Prerequisite: Junior or Senior Standing.
Student teaching opportunities are provided for the junior and senior high school levels of education the major areas of the Industrial Arts program. Opportunities are available for student teachers to acquire experience in several types of Industrial Arts shops: the Comprehensive General Shop, Unit General Shop, and the Unit Shop. Individual conferences with the Critic Supervisor and group conferences with the Supervisor of Student Teaching.
Sem. I, II. Credit: 4 or 6
Chinnock

Education 480 Theory and Organization of General Shop
Prerequisites: Senior Standing (Junior Standing permissible if student has senior standing in educational sequence.)
The history of the general shop, including an analysis of the educational considerations, the identifications of all types of general shops with a study of each to include pupil classifications of boys and girls, equipment combinations, shop operating problems, including those of personal organization, stock room and store room organization and operation. Direct observation in the several types of general shops in The Stout Institute and assignments as assistants in student teaching practice classes in selected general shops. The identfication of instructional methods, teaching devices, and preparation procedures in preparing instructional material. Identification of related information, classifications, and sources.
Sem. I, II. Credit: 2
Brown
Note: Men who have completed the requirements in student teaching and the above course, will be permitted, so far as facilities allow, to take additional two hours of student teaching in general shop work in the senior year and substitute this for two semester hours of technical work in shop work, drawing or design.

Education 407 Teaching Trade and Industrial Subjects
Recognized principles of teaching applied to typical shop situations as found in the school of vocational and adult education. Methods of teaching based upon the psychological aspects of learning as applied to both shop and related subjects. Topics considered are (1) the use of the lesson plan and the job sheet: (2) the demonstration, both for the whole class and for the smaller group; (3) individual practice, the follow-up on the demonstration; (4) assignment of reading and observation; (5) the notebook and note checking; (6) the lecture or class talk; (7) reports by pupils; (8) questioning; (9) checking and testing, examinations; (10) the use of models, charts, graphs, and diagrams; (11) the use of pictures of various kinds; (12) shop hygiene and safety; (13) management, routine, details, and discipline; (14) tool room procedure; (15) the maintenance of tools, apparatus, and equipment; and (16) the selection, care, and purchase of supplies.
SS Credit: 2

Education 443 Problems in Teaching Trade and Industrial Subjects
Individual work representing approved practice in the writing of text material that can be of immediate use in vocational classes. The writing of specific instruction sheets and the preparation of test material suitable for use in vocational classes.
SS
Staff Credit: 2

Education 403 Trade and Industrial Education Workshop
Prerequisite: Senior undergraduate standing, graduate standing, or experience in vocational teaching or industry.
Through individual and group assignments a flexible series of opportunities will be available to work out practical teaching problems in connection with the teaching of trade and industrial subjects in vocational and adult education schools. The credit in this "workshop" will be supplementary to classification courses and will not be substituted in lieu of classification courses. The problems worked out by the students will be specifically practical. Definite standards of practicability will be set up which must be met in order to secure credit. Efforts will be made to group students in small groups where the common factors in their individual problems makes grouping possible. Progress reports will be made from time to time by individuals and small groups, especially on those phases of problems which have a significance in common with all the members in the work shop group. Typical areas of professional preparation would be: Adaptation of Instructional Material to Specific Requirements; Identification and Analysis of Instructional Content; Shop Management and Records; Demonstration Procedures; Shop Lay-outs. The maximum amount of credit which may be completed in three weeks in the Trade and Industrial Education Workshop will be two semester hours. If the student is able to identify and define satisfactory problems, the student may if he so desires take a maximum of four semester hours in the Trade and Industrial Education Workshop by taking two three week periods of work. The Workshop is planned to be of specific assistance in maintaining strong and adequate instruction in the various phases of trade and industrial work meeting the many problems of volume, urgency, and changing content.
SS
Staff Credit: 2 or 4

Education 409 Workshop in Elementary Statistics (Testing and Guidance)
Prerequisites: Senior undergraduate or graduate standing or teaching experience.
The selection and interpretation of tests depend upon an understanding of the basic statistical techniques underlying their construction. An understanding of the terminology in the field of tests and measurements is essential for the administrator as well as the specialist and guidance counselor. Stress will be put upon the meaning and use of the necessary vocabulary terms with a minimum of statistical problem solving. By reducing this mathematical work to a minimum, time will be available for interpretation and application of the basic statistical procedures.
Staff Credit: 2

Ind. Ed. 463 Industrial Arts Education Workshop
Prerequisites: Senior undergraduate standing, with civilian or armed service experience in teaching.
Primarily for teachers with experience who have selected problems on which they wish to do further study. Opportunity will be given for work in typical areas such as: preparation and use of instruction material; methods of instruction; teaching as well as instructional management aids; shop business management; shop planning and evaluation; others may be chosen as the need is indicated. Group as well as individual studies made in the above or other industrial arts areas.
SS
Chinnock and others Credit: 2

ENGLISH

English 102a Freshman Composition
Required of all freshmen. The course is designed to give the incoming freshmen competence in grammatical analysis and correctness, punctuation, mechanics, and the beginnings of logical organization of material. A competence test in spelling is partial requirement for passing.
Sem. I, II. Credit: 3
Callahan, Fleming, Hain, Lehr, Nelson

English 102b Freshman Composition
Prerequisite: English 102a.
Required of all freshmen. The course is designed to add to the freshman's competence in grammatical and mechanical accuracy the principles and practice of rhetorical effectiveness in writing, through increased vocabulary, variety of sentence structure, and varying modes of presentation of material. A competence test in vocabulary is partial requirement for passing. Attention is also given to reading.
Sem. II. Credit: 3
Callahan, Fleming, Hain, Lehr, Nelson

English 346 Expository Writing
Prerquisite: English 102b
Practice and theory of the everyday tasks of exposition, the research report, and the industrial report.
Sem. I, II.
Callahan, Lehr Credit: 2 or 3

English 306 Journalism
Prerequisite: Junior standing.
Practice and theory of news gathering and reporting, journalistic style, copy and proof reading. Discrimination in newspaper reading stressed. Notice taken of the history of journalism, libel.
Credit: 2
Sem. I.
Fleming

English 410 Writing and Selling Feature Articles
Prerequisite: Men—Journalism; Women—Junior standing or consent of the instructor.
Practice in techniques of writing and selling feature articles for appropriate markets. Students are required to submit articles for potential publication.
Credit: 2
Sem. II.
Fleming

English 216 Survey of English Literature
Prerequisite: English 102b.
An introduction to English literature from Beowulf to the end of the nineteenth century. Readings, reports, lectures, class discussions.
Credit: 2
Sem. I, II.
Hain

English 348 Survey of American Literature
Prerequisite: English 102b.
An introduction to American literature from Colonial times to the present. Readings, reports, lectures, class discussions.
Credit: 2
Sem. I, II.
Callahan

English 402 Fiction
Prerequisites: English 216 or English 348.
Reading and analysis of early prose fiction to the modern novel. Accumlative experience through the ages is important in the development of any culture and therefore chronology is stressed as well as analysis.
Credit: 2
Sem. I, II.
Lehr

English 404 Poetry
Prerequisite: English 216 or English 348.
A study of representative American and English poets of the late nineteenth and twentieth centuries.
Credit: 2
Sem. I.
Callahan

English 406 Drama
Prerequisite: English 216 or English 348.
A study of the principles of dramatic literature, with intensive reading of a few great types and wider reading of other plays, regardless of time of composition or national origin. Emphasis upon Shakespeare.
Credit: 2
Sem. II.
Callahan, Hain

English 444 Play Production
Elective for juniors and seniors. The following phases of play production are emphasized: scenery construction; stage costuming; stage make-up; back stage organization.
Credit: 2
Sem. II.
Erickson

English 106 Speech I
Required of all freshmen. Practice in the elements of effective speaking before a class with criticism from the instructor.
Credit: 2
Sem. I, II.
Erickson, Hain

English 223 Speech II
An advanced course in various types of speech making with a careful study of audience analysis.
Credit: 2
Sem. I, II.
Erickson

English 320 Speech III
Materials and methods of discussion. A study of the kinds of discussion, their purposes, strength, and weaknesses.
Credit: 2
Sem. I, II.
Erickson

MATHEMATICS

Mathematics 209 College Algebra
Fundamental processes and selected work in college algebra, including special work in logarithms and the slide rule. Special efforts are made to give each student his maximum progress.
Credit: 4
Sem. I, II.
Rich, Harbour

Mathematics 213 Trigonometry
Prerequisites: Mathematics 209.
Introduction to the elements of trigonometry and the solution of the right and the oblique triangle. Slide rule and logarithmic calculations in solving practical problems. One field problem in the use of the sextant or the transit.
Sem. I, II.
Credit: 3
Rich, Tustison, Harbour

Mathematics 216 College Geometry
Prerequisites: Mathematics 209 and 213; or consent of the instructor.
Construction of three-dimensional figures; classical treatment of selected material to provide experience in giving independent demonstrations; includes a few topics in spherical geometry.
Sem. I.
Credit: 2
Rich, Harbour

Mathematics 220 Spherical Trigonometry
Prerequisites: Mathematics 209, 213, and 216; or consent of the instructor.
This course takes up primarily the solution of the spherical triangle with special application to the astronomical triangle. Basic parts of spherical geometry as they apply will be covered. This course is adapted to those who are interested in the problems in aviation and in world travel.
Sem. I.
Credit: 2
Rich, Harbour

Mathematics 314 Analytic Geometry
Prerequisites: Mathematics 209 and 213; or consent of the instructor.
Algebraic treatment of geometry. A graphical analysis of the straight line, the circle, and conic sections in general.
Sem. I.
Credit: 2
Rich

Mathematics 315 Calculus
Prerequisites: Mathematics 209, 213, and 314; or consent of the instructor.
A course of differential and integral calculus with practical applications.
Sem. II.
Credit: 4
Rich

MUSIC

Music 150 Solfeggio
The study of solfeggio, which includes ear training, is the foundation of musical education. Such fundamental principles as rhythmic notation, measure, three against two, tonal notation and relations, intervals and inversions, diatonic and chromatic scales, signatures, and rhythmic and melodic dictation are studied.
Sem. I.
Credit: 1
Cooke

Music 151 Harmony 1a
Prerequisite: Music 150.
A detailed study of chord construction. All triads in major and minor modes, and dominant sevenths and their inversions. Dispersed harmony. Keyboard work and the playing of cadences.
Sem. II.
Credit: 1
Cooke

Music 152 Harmony 1b
Prerequisite: Music 151.
Introduction to counterpoint; passing tones; contrapuntal treatment of the harmonic material of harmony 1a. Harmonization of scales and simple melodies at the keyboard.
Sem. I.
Credit: 1
Cooke

Music 153 Introduction to and Appreciation of Music
The course deals with the fundamentals of music including form, harmony, instrumentation, and history. Presentation is through lecture, illustration and recordings.
Credit: 1
Cooke

Music 160 Theory
Prerequisite: Music 151 and 152.
Acoustics; musical terminology; notation; ornamentation; the Gregorian modes; description of the orchestral instruments; analysis of music forms; including the song forms. Also practical work in elementary orchestration. This course summarizes the knowledge necessary to every teacher and professional musician.
Sem. I.
Credit: 1
Cooke

Music 162 Conducting
Prerequisites: Junior standing. Participation in at least one of the musical organizations of the college.
Technique of conducting. Chorus and orchestra from viewpoint of prospective conductor. Principles of interpretation. Score reading and transposition. Care and classification of voices.
Sem. II.
Credit: 1
Cooke

Choral Organizations
Membership in the Glee Club is open to all students, but under classmen, especially, are urged to become members. Careful evaluation and testing for classification, basic principles of proper breathing and good tone production, extensive work in sight reading, and the fundamentals of good choral techniques are studied throughout the year.
The Symphonic Singers, an a Cappella choir of seventy voices, is representative of the best Stout has to offer in choral work. The major portion of these singers are one year glee club graduates, and their singing is rapidly earning for them a national reputation. The many appearances during the year include an annual Spring Tour.
Cooke.

Music 164 Men's Glee Club
The Men's Glee Club. Credit: 1
Full Year.
Cooke

Music 165 Women's Glee Club
The Women's Glee Club. Credit: 1
Full Year.
Cooke

Music 166 The College Band
Membership in the college band is open to all students who have had training and experience in the playing of a band instrument. The band not only presents formal concerts, but plays for all athletic events.
(No credit allowed if credit has already been given in orchestra) Credit: 1
Full Year.
Cooke

Music 167 The College Orchestra
The orchestra is an organization of twenty-five members with symphonic instrumentation. Rehearsals are held once a week and special attention is given the string section in private rehearsals. This organization makes public appearances on and off the campus, and provides the accompaniment to the larger choral works presented by the combined glee clubs.
(No credit allowed if credit has already been given in Band) Credit: 1
Full Year.
Cooke

PHYSICAL EDUCATION AND COACHING

Physical Education 127 Physical Education I (Men)
Wide range of free exercises, calisthenics, floor work, and games. In season, work in athletics. Physical efficiency tests to determine individual improvement. Individuals will conduct classes in Physical Education. Life saving tests to qualified individuals who desire Red Cross certificates. Credit: 1
Sem. I, II.
Johnson

Physical Education Intramural Sports (Men)
A complete program of all sports in season consisting of an "Athletics for All" aim.
Johnson

Physical Education 263 Basketball Coaching (Men)
Prerequisite: Physical Education 127 (9 weeks).
Instruction in individual and team fundamentals: Passing, goal throwing, dribbling, turns, stops, special drills, etc. Team play: styles of offense and defense used by the leading coaches. Problems of organization and administration: Schedules, training, selection of material, and the purchase and care of equipment. Credit: 1½
Sem. I, 2nd quarter; Sem. II, 3rd quarter
Johnson

Physical Education 265 Football Coaching (Men)
Prerequisite: Physical Education 127 (9 weeks).
Instruction in individual and team fundamentals: Tackling, blocking, kicking, passing, special drills, etc. Team play. Styles of offense and defense used by the leading coaches. Problems of organization and administration: Schedules, training, selection of material, and the purchase and care of equipment. Credit: 1½
Sem. I, 1st quarter; Sem. II, 4th quarter.
Johnson

Hygene 101 (Men)
This course presents personal and general hygiene as a means of improvement of living. It considers the meaning of health in terms of life values, the biologic approach for the study of health, the place of intelligent control in modern civilization, unscientific and irrational health proposals, ways for improvement of health and prevention of disease. This course does not consider sanitation and public health problems as such. Credit: 1
Sem. I, II.
Johnson

Physical Education 128 Physical Education I (Women)
First year physical education is planned to meet the needs of the women students. Careful observation shows that these are along the lines of personal development, present recreation, and training for future recreation.
Four quarters of physical education are required of each freshman woman. One of these quarters must be given over to a course called "Health and Posture Training." One other activity required of each girl is swimming. These two courses may be taken at any time during the first year.
The activity during the remaining two quarters may be selected by the students according to their interests and abilities. The activities from which they may choose are as follows: field hockey, soccer, tennis, archery, basketball, volleyball, folk dancing, softball, badminton.
The women differ so much in their ability in swimming that the work is given in separate classes to beginner, intermediate, and advanced groups.
Sem. I, II. Credit: 0
Antrim, Miller

Physical Education 228 Physical Education II (Women)
Sophomore women take four quarters of physical education but only one of these is a requirement, swimming. Each girl is urged to select one other individual sport such as tennis, golf, bowling, or archery to be used as a hobby during the junior and senior years. Each individual is also encouraged to take at least one quarter of a team sport. All should develop the social principles of working as a team unit. The electives for the sophomores are: field hockey, soccer, archery, tennis, basketball, volleyball, folk dancing, softball, bowling, and badminton.
Sem. I, II. Credit: 0
Antrim, Miller

Physical Education Recreational Sports (Women)
The Women's Athletic Association sponsors various sports which promote interest and enthusiasm in recreational activities with intramural competition. There is created an opportunity for every girl in school to participate in various recreational activities, and in "play for play's sake."
Organized tournaments are conducted during the year in volleyball, badminton, deck tennis, basketball, bowling, tennis and softball. Unorganized points may be earned in hiking, skating, bicycling, archery and swimming.

NATURAL SCIENCES
BIOLOGY

Biology 122 General Biology
Study of living things, their structure and organization, metabolic processes, behavior, reproduction, and their relationship to their environment and to each other.
Sem. I. Credit: 3
Marshall

Biology 214 Physiology and Anatomy
Man's place in the biological world; human anatomy based on dissection of the cat and other laboratory material; fundamental physiological processes of all the organ systems; embryological development and inheritance of man.
Sem. I, II. Credit: 5
Marshall, Arneson

Bacteriology 206 General Bacteriology
Morphological and physiological characteristics of yeasts, molds and bacteria; methods used in culture and identification; introductory studies in bacterial analysis of water, milk and other problems in sanitation; food bacteriology.
Sem. I, II. Credit: 3
Marshall

Biology 316 Zoology
A survey of the animal field with emphasis on classification, ecology, and evolution and other general subjects. Special consideration is given to parasites and other groups which are economically important to man.
Sem. I. Credit: 3
Arneson

Biology 362 Advanced Physiology
Prerequisite: Biology 214, Chemistry 115.
Histological and quantitative studies on human blood, experiments on frog and turtle hearts and on muscle-nerve preparations of the frog. Experiments on human body.
Sem. II Credit: 3
Arneson

Bacteriology 422 Applications of Bacteriology
Not open to students who have had Bacteriology 206, but may be substituted for that requirement.
Applications of bacteriology to food preservation and community health. Relation of bacteria to the home and institutions.
Sem. I, II Credit: 3
Marshall

Biology 432 Heredity and Eugenics
A study of laws of inheritance and means for improvement of the human race.
Sem. I. Credit: 2 or 3
Arneson

Biology 442 Community Hygiene
Fundamentals of health, etiology of disease, control of communicable disease, public health programs. Pathological, bacteriological, and immunological aspects emphasized. Operation of national and state health laws.
Credit: 2 or 3
Sem. I, II.
Marshall

CHEMISTRY

Chemistry 115 Inorganic Chemistry
Chemical viewpoints, laws, principles and atomic structure as related to chemical reactions. The study of non-metals is followed by that of metals. A constant effort is made to relate material taught to the needs of Home Economics and Industrial Education majors. As far as possible, experiments are selected to assist in such applications.
Credit: 5
Sem. I, II.
McCalmont, Cox

Chemistry 208 Organic Chemistry
Prerequisite: Chemistry 115.
Influence of structure on chemical behavior; isomerism; the study of hydrocarbons, fats, soap, carbohydrates, proteins, plastics, synthetic fabrics, synthetic drugs and vitamins. Appreciations are sought in related organic chemistry, i. e., in cookery, nutrition, laundry, cleaning and other household as well as industrial processes.
Credit: 4
Sem. II.
Cox

Chemistry 322 Biochemistry
Prerequisites: Chemistry 208, Biology 214.
Study of colloids; of proteins and protein digestion products; of the intermediary metabolism of carbohydrates, fats, and proteins in the animal body. Qualitative and quantitive determinations of the end products of metabolism. Nutritional significance of minerals, vitamins and hormones.
Credit: 3
Sem. I.
Cox

Chemistry 445 Chemistry of Materials
Prerequisite: Chemistry 115
Needs of the members of the class shape the trend and emphasis to be placed. At present, the topics most valuable are: Rubber, natural and synthetic, fuels and lubricants as applied to use in all kinds of machines, and metals both ferrous and non-ferrous. At the same time an effort is made to acquaint the students with subject matter directly necessary to understand Industrial Arts problems.
Credit: 3
Sem. II.
McCalmont

PHYSICS

Physics 421 Physics I
Electricity. Mechanics. Heat. Practical applications of general physics laws is stressed in special laboratory problems, or demonstrated by apparatus or machines in actual use. Content applicable to the needs of prospective teachers in industrial education, home economics, and the sciences.
Credit: 5
Sem. I, II.
Tustison, Rich

Physics 423 Physics II
Sound, light, and an introduction to new developments in physics. A continuation of the study of the general laws of physics. Includes acoustics, vision, lighting standards, optical instruments, polarization, and fluorescence. Equipment is exceptionally good.
Credit: 3
Sem. I, II.
Tustison, Rich, Harbour

Physics 425 Physics III
Prerequisites: Physics 421 and 423, Mathematics 209.
Strength of materials and the materials of construction in machine and building trades. Problems in wood, steel, and concrete construction. Standard and special tests in various grades of iron and steel; building materials such as cement, brick and woods of various kinds, glues, screws, nails, and other fasteners.
Credit: 3
Sem. I, II.
Good

Physics 427 Physics IV Electronics
Prerequisites: Physics 421 and 423; or consent of the instructor.
An introduction to the study of electron tubes at work. The control of the action of machines used in industry by means of electronic devices.
Credit: 3
Sem. II.
Rich

SOCIAL SCIENCES

Social Science 201 General Economics
A study of business organization, production, how prices are determined, distribution, the influence of government on business, public utilities, money and banking, public finance, labor organization.
Credit: 3
Sem. I, II.
Agnew, Sutker

Social Science 301 Economic History of the United States
Prerequisite: Social Science 201.
A study of the economic evolution of the United States since colonial times. Approximately two-thirds of the course is devoted to the period since the Civil War. A special emphasis is placed on the development of economic problems and the foundations of modern industry.
Sem. I, II.
Credit: 3
Agnew

Social Science 309 General Sociology
A study of the social heritage; the interdependence of the individual and the group; the influence of group association on the individual's behavior; collective behavior in typical groups of crowds, publics, classes, castes, races, family, community, and social organization; social processes.
Sem. I, II.
Credit: 3
Sutker

Social Science 311 Government
Prerequisites: Social Science 201, 309, or consent of instructor.
A basic course intended to give the student a background of fundamentals. The emphasis will be placed on principles, processes, and problems. The treatment of institutions will be functional; but where there are separate political entities to be considered, they will be analyzed. Approximately half of the time will be devoted to a review of the American governments. Throughout the course, the comparative approach will be used.
Sem. I, II.
Credit: 3
Price

Social Science 326 Problems of the Family
Study of social problems of family life. Special emphasis on development and maintenance of satisfactory family relationships. Should parallel Home Economics, Education 424, Social Science 309.
Sem. II.
Credit: 3
Staff

Social Science 407 History of the Americas
Prerequisites: Social Science 201, 309, or consent of instructor.
The objective in the course is an understanding of the backgrounds of American history in hemispheric relationships. While the basic emphasis will be upon the history of the United States of America, since it is a more familiar point of departure, the ultimate goal is to provide a setting for the student's thinking that gives horizontal and vertical perspective; a breadth of scope that will include Canada and the Latin Americas, and a depth that will suggest Occidental and Oriental influences.
Sem. I, II.
Credit: 4
Agnew

Social Science 409 Recent History of U. S.
A study and interpretation of American history in the twentieth century. Emphasis is put on those developments which best help to explain present United States conditions. Some time is devoted to the study of recent world problems in which the United States has played a part.
Sem. II.
Credit: 2
Agnew

Social Science 410 Modern World
Prerequisites: Social Science 201, 309.
A course concerned primarily with direction pointing movements in modern history which have influenced and shaped the society in which we live. The objective is to provide an understanding of historical "patterns" which will aid the student in evaluating modern trends in terms of historical backgrounds and provide a frame of reference for interpreting the contemporary world.
Sem. I, II.
Credit: 4
Agnew

Social Science 411 Social Problems
Prerequisites: 9 hours of social science or consent of instructor.
A study of the major social problems and tensions in American life which need to be analyzed, interpreted, and understood for effective living in American democratic society. Students will study and participate in the development of solutions for these problems.
Sem. II.
Credit: 2
Sutker

Social Science 414 Labor Problems
Prerequisite: Social Science 309.
A study of the problems of the worker in modern industry, backgrounds of labor movements, current union organization and practice, the foreman; labor and management relations, collective bargaining, and the causes and proposed solutions of such typical problems as unemployment, wages, hours, political activity, and government and labor relations. The Taft-Hartley Law.
Sem. II.
Credit: 3
Sutker

Social Science 417 American Politics
Analysis of modern political parties, nominating methods, campaigns, elections, practical politics in legislative bodies, machines and bosses, and other division of present day American politics. Reforms and remedies for existing political malpractice are critically examined.
Credit: 2
Sem. II.
Agnew

* **Social Science 520 Labor and Industrial Relations**
Prerequisite: Graduate Standing.
A study of accepted and currently disputed practices in labor organization, management organization in dealing with labor, and labor and management relations, including the role of the government in the adjustment of labor management disputes; recent labor laws.
Credit: 2
Sem. I, II.
Agnew and others

HOME ECONOMICS

Art 220 Clothing Selection
Study of the importance of personal appearance and factors which contribute to good personal appearance. Application of art principles to the selection of clothing.
Credit: 2
Sem. I, II.
Jeter, Van Ness

Art 106 Fundamentals of Design
A basic course prerequisite for further art work. Emphasis on the elements and principles of design. A sensitizing course aiming to develop the student's ability to see and to discriminate. Lettering, layout, color theory and practical applications in the field of home economics.
Credit: 3
Sem. I, II.
Niebauer, Leland

Art 332 Advanced Design
Prerequisite: Art 106.
Creative experiences in color and design. Design applications related to clothing and interior decoration. Experiences in techniques of textile design; block printing, stencil, silk screen, batik, stitchery and dyeing. Considerations of applied design and structural design.
Credit: 2
Sem. I.
Niebauer

Art 206 Art Appreciation
A lecture course designed to develop critical judgment in evaluating traditional and contemporary art forms. Emphasis on the broad field of art and how it enriches everyday life. Visits to Minneapolis and St. Paul galleries and shops. Visual aids.
Credit: 2
Sem. I.
Niebauer

Art 400 Crafts
Prerequisite: Art 106.
The creative building of visual things with stress upon fine original design. An introduction is made in several crafts: weaving, leather, metal, ceramics, bookbinding.
Credit: 2
Sem. I, II.
Leland

Art 446 Sketch
To develop facility in sketching required in a variety of home economics problems: costume figures, interiors, charts and other visual devices. Form, value, color, composition; charcoal, pen and ink, and water color.
Credit: 1
Sem. II.
Niebauer

Art 460 Creative Arts
Prerequisite: Art 400.
The student specializes in the mediums which are best suited to his interests and ability.
Credit: 2
Sem. II.
Niebauer

Art 334 House Furnishing
Prerequisite: Art 106.
A study of the housing and house furnishing needs of the family as they relate to beauty, health, privacy, convenience, economy and leisure time activities in the home.
Credit: 3
Sem. I, II.
Niebauer, Leland

Art 323 Problems in House Furnishing
Prerequisite: Art 334.
A course in which curtains, slip covers, and other articles for the house may be planned and made, and furniture reconditioned.
Credit: 2
Sem. I, II.
Niebauer

Home Economics 244 Weaving
An elementary course is planned for those students interested in the processes and techniques of weaving. Instruction will be given to meet the specific needs of the student. The following phases of weaving will be emphasized: plain weave and design variations (texture weaves), pattern weaves, planned on paper and executed on the loom. A thorough study of the modern use of the overshot weave and the various ways of weaving (tabby, honey-comb, bound); summer and winter and various lace types of weaves suitable for table mats. Materials will be purchased by the student.
Credit: 2
Sem. II, SS.
Niebauer

Art 430 Art History
Survey of the fine arts in the most significant periods with emphasis on contemporary work. Visits to museums and galleries.
Credit: 2
Sem. I, II.
Niebauer

Art 436 Costume Design
Prerequisite: Home Economics 218.
Creative approach to clothing design. Experiments with different sources for original design.
Credit: 2
Sem. II.
Niebauer, Leland

Art 410 Pottery
Experience in building pottery with coil and slab methods, throwing on the wheel, underglaze painting, biscuit firing, glazing and gloss firing.
Credit: 2
Sem. II.
Niebauer

Art 526 Seminar in Related Art
Prerequisite: Graduate Standing.
Flexible course in related arts in which the interests and needs of the students will be given important consideration. Fundamental material such as art philosophy and understanding will be studied, with a view to aiding in the integration of art with home economics subject matter.
Credit: 2
SS
Niebauer

FOODS, DIETETICS, AND INSTITUTIONAL MANAGEMENT

Home Economics 112 Nutrition and Health
Parallel: Home Economics 114.
This course emphasizes the maintenance of positive health through desirable food selection and health practices. Planned to help freshmen in their adjustment to better health through nutrition.
Credit: 2
Sem. I, II.
Staff

Home Economics 212 Family Nutrition
Prerequisites: Home Economics 112, 114, Chem. 208 Precede or parallel.
A scientific study of the fundamental principles of human nutrition as a basis for the selection of food for the family group from infancy through old age. Planning of dietaries for various incomes.
Credit: 3
Sem. I, II.
Blazek

Home Economics 114 Food Preparation
Parallel: Home Economics 112.
The study and application of basic principles used in the preparation of food. Correct techniques and methods of preparation are stressed. Products are evaluated according to accepted food standards.
Credit: 3
Sem. I, II.
Staff

Home Economics 230 Food Preparation
Prerequities: Home Economics 112, 114.
A continuation of food preparation as studied in Home Economics 114.
Credit: 3
Sem. I, II.
Carrison

Home Economics 308 Meal Management
Prerequisites: Home Economics 212, 230.
The planning, preparation, and service of meals. Special attention is given to types, costs, equipment, and management of family meals and guest occasions.
Credit: 3
Sem. I, II.
Elliott

Home Economics 438 Experimental Foods
Prerequisites: Home Economics 230, Chemistry 208.
Experimentation with selected food materials, techniques, and equipment. Each student is also given the opportunity for directed study and work in an individually chosen area.
Credit: 3
Sem. I, II.
Elliott

Home Economics 400 Food Demonstrations
Prerequisites: Home Economics 230, 308.
Study and application of the technique involved in planning and giving demonstrations. Observation of demonstrations given by Home Economics Specialists in the commercial field.
Sem. I. Credit: 2
Carrison

Home Economics 446 Food Preservation
Prerequisite: Home Economics 230.
An extensive study and practical application of the methods and principles of food preservation. Special attention given to freezing of foods.
SS Credit: 2

Home Economics 556 Advanced Experimental Foods
Prerequisite: Home Economics 438 or its equivalent, Graduate Standing.
Directed individual investigation in food preparation. Involves an extensive study of principles and applications of research methods as applied to food investigations. Intensive literature review of study undertaken.
SS Credit: 3 or 4
Elliott

Home Economics 310 Nutrition and Dietetics
Prerequisites: Home Economics 212, Dietetics 322 (May parallel).
Aims to continue the study of the science of nutrition, stressing the environmental, physical and chemical factors involved in the digestive and metabolic processes. Planning of dietaries.
Sem. I. Credit: 3
Blazek

Home Economics 418 Diet in Disease
Prerequisites: Home Economics 310, Physiology 362 (May parallel).
The study of the modification of a normal diet as affected by certain diseases. Experiments and problems with respiratory apparatus, calorimeter and laboratory animals.
Sem. II. Credit: 3
Blazek

Home Economics 300 Applied Institution Management
Prerequisites: Home Economics 308.
Students prepare and serve meals in the college tea room under the direction of a student manager. Special emphasis is placed on meal planning, recipe selection, the most economical use of materials and time, dining room management, food preparation, and cost control. Different institution management problems are discussed.
Sem. I, II. Credit: 3
Killian

Home Economics 328 Institution Administration
Prerequisites: Home Economics 452 or 300.
A study of the organization and administration of the food service in various types of institutions such as hospitals, schools, and commercial establishments. The course includes personnel management problems, purchasing methods, the keeping of records and accounts, and housekeeping management.
Sem. II. Credit: 3
Killian

Home Economics 452 Institution Food Preparation
Prerequisites: Home Economics 230, 308.
The laboratory work consists of planning of meals for the institution, standardization of recipes, calculation of food costs, the operation and care of equipment, together with the preparation of food for the college cafeteria. The specific problems of food selection and large quantity preparation are discussed in the lecture period.
Sem. I. Credit: 3
Killian

Home Economics 463 Institution Management Problems
Prerequisites: Home Economics 452 or 300, Home Economics 328.
Directed individual work in selected problems of the institution. Laboratory work can be done in the college cafeteria and tea room.
Sem. I, II. Credit: 2 or 3
Killian

Home Economics 443 School Food Service
Prerequisites: H. E. 212 and H. E. 308 or its equivalent.
Educational possibilities of this program will be considered, also detailed studies of provisions for the school lunch program, management, menu planning, food preparation and service.
SS Credit: 2 or 3
Killian

Home Economics 442 Advanced Food Preparation
Prerequisite: Home Economics 230 or its equivalent, Senior or Graduate Standing.
This course to be offered to students desiring to study the best and newest food preparation methods recommended for conserving food nutrients.
SS.
Elliott Credit: 2 or 4

Home Economics 501 Trends in Nutrition
This course aims to bring students up-to-date on the changing methods of study and direct thinking to the newer nutritional studies.
SS.
Blazek Credit: 2

Home Economics 513 Institution Management Seminar
Prerequisites: H. E. 452 or 300 and H. E. 328, Graduate Standing.
Discussion and interpretation of recent developments in Institution Management.
SS.
Killian Credit: 1

CLOTHING AND TEXTILES

Home Economics 102 Clothing
Emphasis on personal clothing problems and good standards of dress for college women. Fundamentals of clothing construction. Integrated with Art 220.
Sem. I, II.
Jeter, Van Ness Credit: 3

Home Economics 218 Clothing Construction
Prerequisite: Home Economics 102.
A study of personal and technical problems involved in the selection and making of rayon and wool garments. Emphasis on the making and use of a foundation pattern. Some consideration given to economic aspect of individual wardrobe to family income and family clothing needs.
Sem. I, II.
Jeter Credit: 3

Home Economics 320 Advanced Clothing Construction
Prerequisites: Home Economics 218 or equivalent.
Advanced clothing construction involving tailoring techniques.
Sem. II.
Jeter Credit: 2

Home Economics 412 Applied Dress Design
Prerequisite: Home Economics 218.
Practical application of principles of costume design through planning and construction of garments by various techniques including draping. Emphasis on individuality in costume through appropriate use of line, proportion, color and texture. Field trip required.
Sem. II. Credit 2 or 3

Home Economics 414 Children's Clothing
A study of the problems involved in the selecting, planning, and making of children's clothing. Emphasis is placed on the relation of design to self development. Garments are designed and made for children who can be studied in the laboratory.
Sem. I.
Jeter Credit: 2

Home Economics 315 Textiles
Study of fibres, yarns, weaves, finishes and design as applied to the selection of clothing and household fabrics.
Sem. I, II.
Van Ness Credit: 3

Home Economics 472 Advanced Textiles
Prerequisite: Home Economics 315.
Study of investigations and new developments in the textile field. Opportunity for individual problem.
SS
Van Ness Credit: 2

Home Economics 316 Clothing Economics
Prerequisite: Home Economics 317.
Buying points of clothing; evaluation of buying guides; study of clothing plans for good management of individual and family clothing.
Sem. II.
Van Ness Credit: 2 or 3

Home Economics 336 Clothing Problems
Emphasis on preparation for the teaching of clothing. Evaluation and preparation of illustrative material. Flat pattern design. Opportunity for individual studies.
Sem. I, II.
Jeter Credit: 2

Home Economics 471 History of Costume
A study of the development of costume. Factors which influence change in fashion; qualities in style that make for lasting beauty; influence of the past on present-day costume.
Sem. I.
Jeter Credit: 2

Home Economics 500 Tailoring
Application of tailoring techniques in the making of a suit or coat. Preparation of illustrative material for teaching.
SS
Credit: 3
Staff

Home Economics 514 Seminar in Clothing
Problems involved in the selection, adaptation, and presentation of clothing subject matter to meet various conditions. Choice of problems based on needs and interests of individual students.
SS
Credit: 1
Jeter

FAMILY LIFE

Home Economics 116 Personal Development
An orientation course concerned with typical college problems—personal, social, professional.
Sem. I.
Credit: 2
Kirk

Home Economics 317 Consumer Information
Study of motives in consumption; family income and expenditures; selection of commodities and services; buying and selling practices. Evaluation of consumer aids and investigation of local situations. Consideration of present day consumer problems.
Sem. I, II.
Credit: 3
Van Ness

Home Economics 318 Health of the Family
A study of factors essential to health and physical development of adults and children, and of family responsibilities for the maintenance of health standards.
Sem. I, II.
Credit: 2
Trullinger

Home Economics 333 Household Equipment
A study of the selection, construction, operation and mechanical care of household equipment as it is related to the well being of the family group.
Sem. I, II.
Credit: 2
Trullinger

Home Economics 403 Home Management
Prerequisite: Junior Standing.
Management of family resources, time, energy, money and equipment. Emphasis of the social aspects and adjustments of family life. Residence in the Home Management House for six weeks with experience in the management of the house and the care of a young child.
Sem. I, II.
Credit: 3
Trullinger

Home Economics 224 Growth and Development of the Child
Prerequisite: Psychology 123.
A study of the physical, mental, emotional and social growth of the child with guidance implications based on growth. Lecture. Discussion. Observation. One hour per week required for observation of nursery school children.
Sem. I, II.
Credit: 2
Smith

Home Economics 424 Principles and Practices of Child Guidance
Prerequisite: H. E. 224.
Factors involved in the successful personality development of the preschool child. Application of guidance principles to experiences of the preschool child. Evaluation of the literature in the field. Lecture. Discussion. Assisting in the nursery school.
Sem. I, II.
Credit: 2
Smith

TECHNIQUE COURSES IN HOME ECONOMICS

Courses described below have been arranged in collaboration with the State Board of Vocational and Adult Education. The presentation of this group of technical courses has resulted from investigations made in the vocational schools of the state and because staff members and teachers have expressed a need for work of this type.

These classes to be offered during the summer session will be first available for teachers from City Vocational schools and the Rural Vocational centers; remaining vacancies may be utilized by other students. Undergraduate, post-graduate, and vocational classification credit will be allowed upon completion of course requirements.

Home Economics 240 Tailoring as Applied to Home Sewing
A basic course in tailoring techniques planned particularly for teachers working with out-of-school youth and adults. Instruction will be given in the making of lapels, collars, pockets, sleeves, front facings and buttonholes. A choice will be allowed in construction of a tailored garment or the preparation of samples of these processes, whichever teachers find most helpful for instruction purposes. Construction and manipulation of special tailoring equipment will be included.
SS
Credit: 2

Home Economics 241 Advanced Tailoring as Applied to Home Sewing
This course in advanced tailoring is designed for teachers who have taken Home Economics 240 or its equivalent. Emphasis will be placed on developing skill in using tailoring equipment and in considering special problems of class members in tailoring processes. Teachers will have the opportunity to prepare illustrative material for teaching out-of-school youth and adults.
SS
Credit: 2

Home Economics 242 Costume Millinery
This course is planned to develop some ability in the construction and renovation of hats. Consideration will be given to tools, materials, style, construction fundamentals, care and renovation. Students will furnish their own materials. Special demonstrations in costume millinery will be presented.
SS
Credit: 2

Home Economics 243 Rug Design and Construction
The course is planned to give instruction in rug design and construction. Emphasis will be placed on individual projects, giving the students experiences in the selection of materials and equipment. Selection of materials, preparation if needed such as dyeing, color harmonies and designing of patterns for rugs will be stressed. Students may select one type of rug on which they wish to work. Special consideration will be given to rug hooking.
SS
Credit: 2

Home Economics 245 Constructing Slip Covers and Draperies
A course designed to help homemaking teachers work with students in constructing slip covers, draperies, and other home accessories. Equipment, materials, types of slip covers and draperies, procedure in construction, and the care of slip covers and draperies will be considered. Instruction in special finishes for slip covers and draperies will be given. Students may provide the piece of furniture upon which they wish to work. Those students finding it impossible to provide for their own individual project will be given an opportunity to work in groups upon specially arranged projects.
SS
Credit: 2

Home Economics 246 The Repair and Maintenance of Home Furniture
A course for teachers to help them meet specific problems in the improvement and care of home furniture. Instruction will be given on simple upholstery techniques for home repair and maintenance of furniture, such as applying webbing, tying springs, covering, padding, stitching, trimming, cording, lining, and other processes. Emphasis will be placed on selection of furniture coverings, planning the coverings, using tools and accessories for home repair or upholstery. Opportunities will be provided for experience in finishing and refinishing wooden surfaces. Students should make an effort to provide their own work project.
SS
Credit: 2

Home Economics 511 Nutrition Seminar
Graduate Standing.
Reports, discussions and readings.
SS
Blazek
Credit: 1

Home Economics 508 Food Seminar
Graduate Standing.
Discussion and interpretation of recent developments in foods.
SS
Elliott
Credit: 1

Home Economics 416 Nutrition Readings
Senior Standing
Aims to acquaint the student with literature in field of nutrition. Abstracts, Reports, and Discussion.
Sem. II.
Credit: 1
Blazek

INDUSTRIAL EDUCATION

SHOP WORK, DRAWING, AND DESIGN

All courses in this group are nine weeks in length, meeting daily. Due to the variation in the types of content included in these courses the following tabulation is given to indicate the time requirements for credits.

Figures in parentheses indicate hours in preparation:

1 period	per week (2)	18 wks.	1 semester hour
2 periods	per week (1)	18 wks.	1 semester hour
3 periods	per week (0)	18 wks.	1 semester hour
6 periods	per week (0)	9 wks.	1 semester hour
12 periods	per week (0)	9 wks.	2 semester hours
10 periods	per week (2)	9 wks.	2 semester hours

Industrial Education Orientation
(For Industrial Education Freshmen.)
Admission requirements, program operation, attendance regulations, credits, scholastic measurement. Analysis of characteristics of a good performance in shop or drawing courses, in professional courses, in academic courses, and as a teacher. Personnel problems in physical, social, and mental phases. Curriculum opportunities, professional requirements, trend in requirements in calls for teachers. Analysis of personal performances. Significance of choices available.
Credit: 0
Sem. I. Meets 1 hr. per week, Sem. I
Bowman, Price

DRAWING

Industrial Education 121 Elements of Mechanical Drawing
Basic relations. Organization patterns. Graphic representation of fabricated objects by various drawing techniques including, orthographic projection, development, production illustration, etc.
Credit: 2
Sem. I, II.
Green

Industrial Education 234 Mechanical Drawing
Prerequisite: Industrial Education 121.
Advanced problems in projections, auxiliary views, intersections, revolutions and developments.
Credit: 2
Sem. I, II.
Green

Industrial Education 130 Aircraft Drafting
Prerequisite: Industrial Education 121.
Airfoil profiles, L. E. radius, angle of incidence, wing construction, elevator and stabilizer details, fuselage, landing gear, tubular structure, rigging details, engine mounting.
Credit: 2
Sem. II.
Green

Industrial Education 226 General Drawing
Prerequisites: Industrial Education 118 and 121.
The place of drawing in general education. Life situations, organization patterns, social and economic background. Problems involving the use of various types of organization patterns including flow sheets, operation diagrams, comparative value charts, working drawings, etc.
Credit: 2
Sem. I, II.
Green

Industrial Education 228 General Drawing
Prerequisites: Industrial Education 121, 118.
This course is planned for those who wish to make contact with phases of drawing that have not been stressed in other drawing courses. Modern techniques are utilized and explained in light of teaching the drawing at various levels in high school or vocational school. A student is urged to concentrate on those shop techniques that he feels he needs in teaching. The organization of a teaching syllabus in drawing is prepared for a subject that will aid the student in his student teaching or out in the field. It is recommended that the concentration be in his chosen field if possible.
Credit: 2
Sem. I, II.
Ray

Industrial Education 227 Machine Drawing
Prerequisites: Industrial Education 118, 121 and one course from the metal work group.
A popular treatise on machines. Social and economic aspects, analysis of machines, historical development, materials, shop processes. Some elements in machine design. Standard parts. Graphic instructions for fabricating machine parts.
Credit: 2
Sem. I, II.
Green

Industrial Education 229 Machine Drawing
Prerequisites: Industrial Education 227, Mathematics 211.
Cams and gears. Analysis of motion, motion diagrams. Design of various types of cams. Use of odontograph in gear layout. Spur and bevel gears. Worm and worm wheel.
Credit: 2
Sem. II.
Green

Industrial Education 329 Machine Drawing
Prerequisite: Industrial Education 227.
Production illustration. Various types of mechanical pictorial representation applied to machine parts.
Credit: 2
Sem. I.
Green

Industrial Education 433 Machine Drawing
Prerequisite: Industrial Education 329.
Planning and designing machines. Considerations of strength, use, operation, manufacture. Planning jigs and fixtures.
Credit: 2
Sem. II.
Green

Industrial Education 118 Freehand Drawing
A study of the basic fundamentals involved in freehand drawing such as lines, circles, ellipses, geometric solids, freehand perspective, shade and shadows, still life, thumbnails, technical sketching, blackboard practice, pastels or crayon, pen and ink work. A term sketch is submitted at the end of the course.
Sem. I, II.
Credit: 2
Ray

Industrial Education 224 Freehand Drawing and Design
Prerequisite: Industrial Education 118.
This course is advanced freehand drawing and designing: a study of lettering and alphabets, monograms, trade marks, seals, book plates, ornamental signs, either in metal or wood, entrances, garden furniture, advertising layouts, show card and poster work; silk screen and stencil cutting, memory sketches required daily. Industrial arts design is stressed. Crayons and water color sketching.
Sem. I, II.
Credit: 2
Ray

Industrial Education 231 Architectural Drafting
Prerequisites: Industrial Education 121, 118.
Basic elements in the planning and construction of residential buildings, frame and masonry, lettering, symbols, conventions, footings, foundations, sill construction, cornices, windows, stairs, fireplaces, and accessories. A preliminary study of drawings plans, involving elevations, floor plans, details and perspective rendered in pastel. Illustrated lectures on kitchen layouts, living rooms, dining rooms, bathrooms, sleeping rooms, etc.
Sem. I, II.
Credit: 2
Ray

Industrial Education 233 Architectural Drafting
Prerequisites: Industrial Education 121, 118, 231.
Preparation of preliminary sketches for the problem: a set of working drawings for a residence five or six rooms, costing $6,000 to $10,000 in frame or masonry involving floor plans, elevations, details, perspective estimates, and specifications. Lectures on current style of residential architecture with slides. Study of kitchens, bathrooms, living rooms, bed roooms, basements, and recreational rooms, with colored slides. A term report and class discussion on some phase of current building practice. Prefabrication and its future. Desirable references in the field are stressed and selections of teaching material.
Sem. I, II.
Credit: 2
Ray

Industrial Education 331 Architectural Drafting
Prerequisites: Industrial Education 121, 118, 231.
The student creates his own design following some definite style of his own choosing. Preliminary plans are prepared from which a model is made, landscaped, rendered, and photographed. Model making, studies of uses in all proposed housing layouts, illustrative material through slides. Studies of current architectures including materials, substitutes, and preassembled units in housing.
Sem. I, II.
Credit: 2
Ray

Industrial Education 431 Architectural Drafting
Prerequisites: Industrial Education 121, 118, 231, 331.
Orders of architecture, history of architecture, reports on assignments, contracts, heating and sanitation, business housing, and public buildings. Lectures on readings on architecture, past, present, and future. Study of architecture and its relation to human progress including significant factors in vocational guidance.
Sem. I, II.
Credit: 2
Ray

Industrial Education 471 Architectural Drafting
Prerequisites: Industrial Education 231, 233, 331, 431.
Fundamentals of architectural design. Shades and shadows, coordinate planes, casting shadows, determination of shadows. Perspective drawing, types of perspective, classic orders, proportion, elementary principles of architectural rendering. Preparing thumbnail sketches of proposed buildings, and drafting elevations for study. Exhibition and rendering drawings of proposed layouts.
Sem. I, II.
Credit: 2
Ray

ELECTRICAL WORK

Industrial Education 119 Industrial Electricity
Essentials of electricity including wire splicing, Ohm's Law experiment, cells and batteries, signal circuits, simple light and power circuits, house wiring, direct current lighting and power circuits, direct current generators and motors, practical applied problems.
Sem. I, II.
Credit: 2
Good

Industrial Education 343 Industrial Electricity
Prerequisite: Industrial Education 119.
Magnetic circuits as applied to coils, motors, generators, and transformers. Illumination. Insulation and insulators. Armature windings and winding projects. Mutual and self-inductance. Conduit wiring projects.
Sem. I, II. Credit: 2
Good

Industrial Education 345 Industrial Electricity
Prerequisites: Industrial Education 119, 343.
Theory and essentials of alternating currents. Shop problems dealing with alternating current measuring instruments, transformers, and various types of alternating current motors and generators and their accessories.
Sem. I, II. Credit: 2
Good

Industrial Education 347 Electricity (Radio)
Prerequisite: Industrial Education 119 (Essentials of Electricity), or equivalent.
Theory and fundamentals of radio communication circuits. Many standard circuits are set up and tested in the laboratory. Part of the class period will be devoted to code practice.
Sem. I, II. Credit: 2
Kranzusch

Industrial Education 357 Electricity (Radio)
Prerequisite: Industrial Education 347 or equivalent.
A continued study of radio communication circuits and power supplies. The class period will be devoted largely to shop and laboratory work.
Sem. I, II. Credit: 2
Kranzusch

MECHANICS

Industrial Education 253 General Mechanics
Prerequisites: Industrial Education 121, 119, 115, 107, 109.
Selections of jobs typical for the content courses in home mechanics; practical mechanics; and simple mechanics. General education is made the basis for the major portion of the shop assignments. Because of its general character, much of the work is adaptable to courses set up for girls in these fields. Bench and mechanical equipment affords excellent opportunity for work in projects in woodwork, ceramics, electricity, woodfinishing, plastics, and bench metal work.
Sem. I, II. Credit: 2
Kranzusch

Industrial Education 365 General Mechanics
Prerequisite: Industrial Education 253.
Continuation of General Mechanics in additional and advanced problems. Problems of arts and crafts nature are added to the already varied program. This additional field lends itself to work of an extracurricular character. New fields of general mechanics nature are explored and original research in developing new problems is stressed. The informational as well as the manipulative content is covered.
Sem. I, II. Credit: 2
Kranzusch

Industrial Education 369 General Industrial Mechanics
Prerequisite: Sophomore standing or equivalent in technical sequence.
A general survey of the power, mechanics, and materials involved in the various types of industries and in the machines, appliances and mechanical devices used by the average citizen. With this survey of each industry a study is made of the history and development, sources of raw materials, methods of production and production control, labor conditions, government legislation, and economic significance.
Sem. I, II. Credit: 2
Good

Industrial Education 375 Industrial Mechanics
Prerequisites: Industrial Education 369 and junior or senior standing in technical sequence.
This is an advanced course in industrial mechanics operated very largely on an individual assignment basis. Each member of the class is assigned or selects special phases in individual industries for more concentrated study. His findings are presented to the class for discussion and analysis. The purpose of these courses is to prepare teachers to develop the desire and ability of high school students to recognize and interpret mechanical and social change in our industrial life.
Sem. I, II. Credit: 2
Good

METAL WORK

Industrial Education 242 General Motor Mechanics
A basic course in the study of the internal combustion engine and its application to units of transportation and stationary equipment. Information on the use of power and its subordinate units, as applied to travel by land, sea and air, and to stationary engines and equipment will be studied through the use of laboratory demonstrations and illustrative material. Assignments in report form will be emphasized.
Sem. I, II.
Kranzusch Credit: 2

Industrial Education 245 Auto Mechanics
Prerequisites: Industrial Education 113, 119.
Seven weeks to the study, repair, and adjustment of the various units of the chassis not including the engine, on live cars brought into the shop. Body and fender repair and refinishing is emphasized in this course.
Sem. I, II.
Kranzusch Credit: 2

Industrial Education 247 Auto Mechanics
Prerequisite: Industrial Education 245.
Modern shop practices in engine tune-up and in overhauling and repairing auto engines and their accessories. Reboring and honing cylinders; fitting new pistons, rings and piston pins; reseating, grinding, and testing valves, repairing and adjusting carburators.
Sem. I, II.
Kranzusch Credit: 2

Industrial Education 341 Auto Mechanics
Prerequisites: Industrial Education 245, 247.
Electrical equipment of the automobile. Construction, principles of operation, adjustments and repair of the various types of circuits, operating units, and storage batteries. Practice in diagnosing, locating, and repairing electrical troubles on live cars.
Sem. I, II.
Kranzusch Credit: 2

Industrial Education 451 Auto Mechanics
Prerequisites: Industrial Education 245, 247, and 341.
For teachers and prospective teachers of auto mechanics, giving experience in the preparation of instructional units for junior and senior high schools and for vocational schools. Selection and organization of teaching material, shop layout, student routing and shop management, equipment selection, dispensing and checking of shop tools and equipment.
Sem. II.
Kranzusch Credit: 2

Industrial Education 243 Foundry
Molding, involving cutting and tempering molding sand preparatory to ramming bench and floor molds. Core making involving making and baking cores for molds. Cupola practice, including operation of the cupola and the handling and pouring of molten metal. Selecting, mixing, and melting pig iron and machinery scrap to secure machineable qualities in the castings. Two or three heats of cast iron. Melting and pouring of brass and aluminum in a crucible.
Sem. I, II.
Milnes Credit: 2

Industrial Education 337 Foundry
Prerequisite: Industrial Education 243.
Advanced molding projects match plates for production work; metallurgy of the foundry. Several heats of iron, brass, and aluminum.
Sem. I, II.
Milnes Credit: 2

Industrial Education 113 Machine Shop
Construction and operation of the lathe, milling machine, drilling machine, shaper, and grinding machine. Shapes of the cutting tools, grinding setting, and operating. Calculations to obtain the correct feeds and speed for cutting various metals. Related technical information. Projects involve basic processes on each machine.
Sem. I, II.
Milnes Credit: 2

Industrial Education 235 Machine Shop
Prerequisite: Industrial Education 113.
Spiral gear cutting and rack cutting, involving the use of the milling machine. Internal and external square thread cutting on the lathe. Cylindrical grinding on the universal grinder. Stress upon related information pertaining to machine shop work.
Sem. I, II.
Milnes Credit: 2

Industrial Education 237 Machine Shop
Prerequisites: Industrial Education 235 and 227.
Worm gearing, tool and cutter grinding, and problems in tool making. Planning, drilling, and tapping cast iron machine parts. A survey of the trade is made with view to organizing material for teaching. Material uses and cost studies.
Sem. I, II.
Milnes Credit: 2

Industrial Education 435 Machine Shop
Prerequisite: Industrial Education 237.
Bevel-gear cutting, punch and die making, internal grinding, problems in tool making. Studies of selection of appropriate materials. Organization of project material and instructional units.
Credit: 2
Sem. I, II.
Milnes

Industrial Education 115 Sheet Metal
Fundamental machine and hand tool operations; care, use, and adjustment of sheet metal equipment; the development of simple patterns, involving parallel and radial lines; direct layout and short methods; study of markets, manufacture, buying, etc. of equipment and supplies.
Credit: 2
Sem. I, II.
Keith

Industrial Education 239 Sheet Metal
Prerequisite: Industrial Education 115.
Drafting irregular patterns by means of triangulation; triangulation using the top view in the layout; triangulation using both top and side view in the layout; triangulation using the side view only in the layout; shop practice in the make-up of irregular fittings from various fields of sheet metal work.
Credit: 2
Sem. I, II.
Keith

Industrial Education 241 Sheet Metal
Prerequisite: Industrial Education 115, 239.
This course in sheet metal gives further practice in layout and shop work and applies many operations as a review of the preceding courses. Some cabinet work and spot welding is done. Shop practice, care and adjustment of machines and hand tools is stressed.
Credit: 2
Sem. I, II.
Keith

Industrial Education 333 Sheet Metal
Prerequisites: Industrial Education 115, 239, 241.
Instruction and practice in such operations as raising, forming, stretching, shrinking, bending, etc. Also the working of copper, brass, aluminum, pewter, monel metal and others; their uses and application in sheet metal work; projects involving soft and hard solder, spinning, raising, chasing, seaming, piercing, etching, coloring, etc.; study of related and technical information, markets, and supplies.
Credit: 2
Sem. I, II.
Keith

Industrial Education 335 General Metal
Prerequisite: Industrial Education 113.
General shop of the trade group type. Organization, courses of study, layout, equipment, operation, uses of instructional material, supplies. Shop work in selected projects, representing bench metal, forging, heat treating, machine shop, oxy-acetylene welding and cutting.
Credit: 2
Sem. I, II.
Betterley

Industrial Education 355 General Metal
Prerequisites: Industrial Education 335 and 455.
Continuation of General Metal I. Advanced work in ornamental and tool forging. Oxy-acetylene welding power hammer work, bench metal, heat treating, and the use of ceramic tile in combination with metal. A study is made of new machines, tools, and metals, their manufacturing costs, etc.
Credit: 2
Sem. I, II.
Betterley

Industrial Education 455 Oxy-acetylene Welding
Prerequisite: Industrial Education 335.
Instruction and use of equipment such as generators, manifolds, tanks, gauges, torches, etc. The study of safety from the welder's view point. Much time is devoted to the study of welding of all common metals. Both hand and machine cutting of steel is done by the student. Welds are tested and checked. A study is made of filler rods, fluxes, etc.
Credit: 2
Sem. I, II.
Betterley

Industrial Education 457 Electric Arc Welding
Prerequisite: Industrial Education 335.
A study is made of the different types of arc welding equipment, their characteristics and operation, safety, symbols, types of electrodes, etc. Actual welding practice involves the preparation of joints, striking and manipulation of the arc in various weld positions, welding of the common metals with different types of welding machines, hand and machine cutting, destructive and non-destructive testing of welds.
Credit: 2
Sem. I, II.
Betterley

PRINTING

Industrial Education 117 Elementary Composition
Elements of composition, stonework, and platen press work. Graded projects in straight composition involving basic operations of job printing, proof reading. Supplementary lectures, demonstrations, and tests given in definite teaching units.
Sem. I, II.
Credit: 2
Baker, Barnard

Industrial Education 255 Advanced Composition
Prerequisite: Industrial Education 117.
Advanced Composition. Problems in display composition, stonework, and platen press work. An introduction to commercial problems and jobs, through the use of typical projects. Allows gain in skill as craftsman. Supplementary lecture periods devoted to typographical design and its application.
Sem. I, II.
Credit: 2
Carlsen

Industrial Education 257 Machine Composition
Prerequisites: Industrial Education 117, 255.
Study of intertype and linotype machines. Includes study of the complete mechanism, care, and operation of typesetting machines. Time divided between mechanism and practice operating. Sufficient time is spent on study of mechanism of the machine to give complete knowledge of principles and care.
Sem. I, II.
Credit: 2
Carlsen

Industrial Education 259 School Publications
Prerequisites: English Composition 102a and b.
Prepares teachers to handle school periodicals as a part of their work. Study of school newspapers, magazines, and annuals from the viewpoint of organization and operation. Elements of journalism and their application from the viewpoint of the advisor. The Stoutonia, the weekly college newspaper, and morgue used as a laboratory.
Sem. I, II.
Credit: 2
Baker

Industrial Education 351 Printshop Mechanics
Prerequisites: Industrial Education 117, 255, 257, 459.
Course designed to cover study of adjustments and care of all machines found in the school and job shop, including platen and cylinder presses, automatic feeders, stereotype equipment, linotype, intertype, monotype, paper cutters, stitchers, and folders. Operation tests on each. Study and reference will include special work and storage equipment.
Sem. I, II.
Credit: 2 or 4
Carlsen

Industrial Education 359 Cooperative Industrial Printing
Prerequisites: Industrial Education 117, 255, or equivalent.
Full time work in a commercial shop under the supervision of a coordinator. Campus cooperative printing consists of production work at the college press under shop conditions. No outside preparation. Time required, 100 clock hours actual production experience in college press for two semester hours of credit. On request for qualified students.
All year.
Credit: 2 or 4
Baker, Carlsen

Industrial Education 361 Printing Design
Prerequisites: Industrial Education 117, 255.
Application of elementary art and design to practical printing. Study of type design, commercial layouts, colors, papers, cover design, folders, and booklets. Lectures, shop work and drawings. Application of printing techniques to design.
Sem. II.
Credit: 2
Baker

Industrial Education 363 General Graphic Arts
An elementary course in basic graphic arts reproductive processes intended for those wishing to offer general exploratory and informational units to classes of secondary school levels. A correlation between the fine and practical arts. Lecture, demonstration and production units are offered in letter press, stereotype, wood and resilient block-cutting, lithography, etching, silk screen, stencil, offset, ditto, engraving, acquatints, embossing, layout, paper-making, book binding, photo engraving, and steps in the production of a book. Emphasis on development of instructional material.
Sem. I, II.
Credit: 2 or 4
Barnard

Industrial Education 374 Offset Lithography
Prerequisite: 6 semester hours in Printing
A course designed to give the student a basic working knowledge in the field of offset lithography. Units in the course which will be covered are copy photography, copy preparation, methods of preparing copy, plate making, operation and care of

the multilith press and bindery and imposition methods. Projects will essentially be live jobs. Lectures and instructional material will supplement the laboratory work.
Credit: 2
Sem. I, II.
Barnard

Industrial Education 376 Advanced Lithography
Prerequisite: Industrial Education 374.
A continuation of I. E. 374 intended to increase skills in manipulation of machines used, as well as preparation of intricate copy, stripping of negatives in plate making, and preparation of copy for multiple color work.
Credit: 2
Sem. I, II.
Barnard

Industrial Education 449 Printing Economics
Prerequisites: Industrial Education 117, 255.
Aequaint the teacher of printing with economic problems of both commercial and school print shops. Shop organization and management, purchasing of equipment and supplies, shop layouts, and cost estimating. Lectures supplemented by references and practical problems. Part time devoted to organization of material for instructional purposes, and development of printing tests.
Credit: 2
Sem. I, II.
Baker

Industrial Education 459 Presswork
Prerequisites: Industrial Education 117, 225.
Practical problems and operation of platen and cylinder presses, and automatic feeders, imposition of large forms. Research problems in presswork. Field study of modern presses, multiple-color, rotary, rotogravure, offset, and automatic feeding machinery. Problems in bindery operations involving bindery machinery. Study of paper and inks and their importance in the press room.
Credit: 2
Sem. I, II.
Carlsen

Industrial Education 557 Problems in Graphic Arts
Prerequisite: Graduate Standing.
Work in this course is based on individual projects affording opportunity to experiment in the field of graphic arts in advance of opportunities offered in regular courses. Projects selected must contain approved factors of educational significance, technical accuracy, and be of a type not previously covered by the individual. Definite use of shop laboratories as well as literature is expected. Work is carried on by arrangement and conference and is put in permanent form by means of a term paper.
Credit: 2
SS
Baker

WOODWORK

Industrial Education 107 Hand Woodwork
Study of and performance in fundamental processes and operations; tool and material nomenclature; fitting, setting, adjusting, and manipulating hand tools; laying out and making common joints; identification of woods; getting out stock; estimating quantities of lumber; and constructing one or more small projects.
Credit: 2
Sem. I, II.
Soderberg and Others

Industrial Education 131 Machine Woodwork
Fundamental theory and applied practice in independent and dependent setting up and operation of basic machines. Wood identification, estimating, scaling and tallying lumber. Use of working drawings, stock cutting bills, patterns, rods, jigs, forms, models showing traditional and modern styles with varied structural design. Roughing out, building up, squaring stock; laying out and machining joints and contour for sample teaching demonstration models or a small project on a bi-product basis.
Credit: 2
Sem. I, II.
Hansen

Industrial Education 215 Cabinet Work
Prerequisite: Industrial Education 107, 131, 311.
Testing in moisture content, expansion and contraction, atmospheric conditions governing lumber drying, conditioning, case hardening, honeycombing, checking and structural design. Intersectional relationship of members with joints appropiate for open and enclosed base or sanitary construction. Glue, veneer and plywood and hardware. Material developed in Industrial Education 311 should be improved and used in this course, or institutional equipment may be built.
Credit: 2
Sem. I, II.
Hansen

Industrial Education 312 Cabinet Work
Prerequisites: Industrial Education 107, 131, 311, 215.
Study and practice in extension and expansion of Industrial Education 215 with more freedom for self expression in methods, procedures and standards. Theory and practice in drawer and door construction, fitting, hanging and trimming. Extra curricular use of shop is encouraged in and after this course.
Credit: 2
Sem. I, II.
Hansen

Industrial Education 411 Cabinet Work
Prerequisites: Industrial Education 107, 131, 311, 215, 312.
Informal study and practice in extension and expansion of Industrial Education 312 plus forms, arrangement and expressions used in requisitions, orders, invoices, bills of lading, stock bills, inventories. Shop layouts, buying, installation and care of equipment and supplies. Professional problems, personnel organization and management.
Sem. I, II.
Credit: 2
Hansen

Industrial Education 219 Carpentry
Prerequisites: Industrial Education 107, 131.
Surveying and staking out for buildings; concrete forms construction, floor framing, wall framing, and roof framing in actual house construction; the steel square as used in roof framing, sheathing, shingling and insulating; correlation between workers in carpentry and between the building trades. Reference assignments and "round table"' discussions.
Sem. I, II.
Credit: 2
Olsen

Industrial Education 319 Carpentry
Prerequisites: Industrial Education 107, 131, 219.
Review of equal pitch roof framing; study and construction of unequal pitch roof, framing; cornice construction, porch framing and finishing; exterior trimming; scaffold construction; study of building materials; quantity surveying and ordering materials; projects for teaching carpentry; workers in the carpentry trades; reference assignments and "round table" discussions.
Sem. I, II.
Credit: 2
Olsen

Industrial Education 421 Carpentry
Prerequisites: Industrial Education 107, 131, 219, 319.
Interior finishing; elements of stair building; polygonal and curved roof and ceiling construction; structural design in framing; structural and aesthetic design in finishing; organization of teaching material and shop equipment for courses in carpentry; supervision of a carpentry teaching job; carpentry as a life work; reference assignments and reports.
Sem. I, II.
Credit: 2
Olsen

Industrial Education 116 General Woodwork
Prerequisites: Industrial Education 107, 131.
A general shop course which provides (1) information and practice in several basic kinds of woodwork and (2) observation and study of a revolving plan for general shop instruction. The nine-week course is divided into three three-week units and the class into three groups. Each group changes to a new unit of instruction at the end of three weeks. The range of work covered includes elementary upholstery, layout work for wood construction, pattern and form making.
Sem. I, II.
Credit: 2
Olsen

Industrial Education 371 General Woodwork
Prerequisites: Industrial Education 117, 131, 116.
This course is a follow up of General Woodwork, Industrial Education 116. Experience is given in organizing and maintaining a general wood shop. Shop and classroom equipment are planned, designed and constructed as individual or group projects. Opportunities are offered for developing individual interests. Blueprints, photographs and other illustrations of the classwork are prepared and made available to students.
Sem. I, II.
Credit: 2
Olsen

Industrial Education 440 General Materials Supplementing Wood
The purpose of this course is to develop ability to work with a wide range of materials supplementing natural wood. Some of these are plywood, presswood, fiber, plastics, fiber board, cork, linoleum, sheet rubber, asbestos, etc. Emphasis is placed on selection of materials in terms of suitability, appearance and use of the project. Devices are studied and methods are practiced in cutting, shaping, assembling and finishing these materials.
Sem. I, II.
Credit: 2
Olsen

Industrial Education 111 Woodturning
Prerequisites: Industrial Education 107, 131, 118.
Spindle turning, concentric and offset. Face plate and chuck turning. Mandrel turning. Segmental and other built-up work. Boring and internal turning. Split turning, cutting spirals. Fluting. Inlaying. Applying finishes to turned articles.

Shaping and sharpening woodturning tools. Standard and special turning tools. Modern production methods and machines for woodturning.
Sem. I, II. Credit: 2
Olsen

Industrial Education 311 Design in Furniture and Case Work

Prerequisites: Industrial Education 107 and 131.

Laws, theories, and principles of aesthetic and structural design. Planning, designing, isometric pictorial sketching, making mockups, orthographic working drawings, stock cutting bills, patterns, jigs, and job plans for basic and fill-in projects for chosen educational levels. An optional field trip.
Sem. I, II. Credit: 2
Hansen

Industrial Education 313 Design in Furniture and Case Work

Prerequisite: Industrial Education 107, 131, 311.

Study and practice in extension and expansion of Industrial Education 311 with more individual freedom in dealing with choice, designing drawing and making rods, jigs, patterns and forms. Laying out moulder shaper knives.
Sem. I, II. Credit: 2
Hansen

Industrial Education 263 Millwork

Prerequisite: Industrial Education 107, 131, 215.

Millwork production with building trades production standards including sash, doors, screens, sash and window frames, moldings, built in cabinet work. Occasional stair work. Milling stock for classes in other courses.
Sem. I, II. Credit: 2
Hansen

Industrial Education 267 Millwrighting

Prerequisite: Senior or advanced junior rating.

Care and maintenance of woodworking machines, improvement in shop layout and equipment facilities. Power saw and knife fitting and setting. Band saw brazing, machine installation, alignment and adjustment. Knife cutting angles; grinding bevels, backing clearances, cutting speeds, feeding rates. Making molding knives, special guards, attachments and jigs. Power transmission problems, belt splicing and bearing adjustments.
Sem. I, II. Credit: 2
Hansen

Industrial Education 260 Saw Fitting

Prerequisite: Sophomore rating and arrangement with instructor.

The major part of this course will be in fitting hand and power saws that can be machine filed. Practical experience in study and performance for correct pitch, bevel, rake and spacing required for best results in use of several kinds of saws. Setting up and operating machine saw filers.
Sem. I, II. Credit: 2
Hansen

Industrial Education 447 Institutional Production

Prerequisites: Industrial Education 107, 131, 311, 215 with B average.

An opportunity for study and participation in planning, or organizing, managing and building specific institutional equipment with primary stress on typical industrial problems in methods, procedures, time, cost and values. For those who have qualified in preliminary courses where the primary stress was on basic fundamentals in knowledge and performance in technical subject matter content with the project as bi-product. 447 will provide screening for 448 and possible credit toward vocational qualification.
Sem. I, II. Credit: 2
Hansen

Industrial Education 448 Cooperative Woodwork in Industry

Prerequisite: Industrial Education 447 and special arrangement with instructor approved by director.

When affiliations with industrial concerns can be arranged for mutually cooperative education, industrial plant and student benefit with possible indenture for vocational training credit.
Sem. I, II. Credit: 2
Hansen

Industrial Education 209 General Finishing

Study and practice in application and uses of various finishes for composition material, plastics, wood, and metal. Study and practice in color theory, spraying, baking, drying, polishing, and refinishing.
Sem. I, II. Credit: 2
Soderberg

Industrial Education 221 Painting and Decorating

Prerequisite: Industrial Education 209.

Study and practice in application of color theory, color mixing, graining, stenciling, marbling, etc. Panels of special wall finishes, mottling, stippling, and texturing with plastic materials. Production work and shop maintenance.
Sem. I, II.
Soderberg Credit: 2

Industrial Education 225 Patternmaking

Prerequisites: Industrial Education 107, 227.

Wood patterns of machine parts for casting in iron, brass and aluminum. Study of types of work performed by patternmakers. Patternmaking allowances; shellacking pattern to convey information to a molder. Patterns involving solid, split, and segmental construction; core boxes for whole and half cores; right and left hand, interchangeable baked sand cores. Patternmaking materials. Visit to a foundry.
Sem. I, II.
Milnes Credit: 2

Industrial Education 325 Patternmaking

Prerequisites: Industrial Education 225, 243.

Pattern for sheave wheel; bevel gear blank; mounted and gated patterns for production work; irregular shaped patterns and match plates; two inch soil pipe fittings involving bench lathe work and built up core box construction. Segmental pully construction involving spokes, webs, and bosses. Survey of patternmaking and organization of instructional material.
Sem. I, II.
Milnes Credit: 2

Industrial Education 211 Aircraft Construction

Prerequisites: Industrial Education 107, 131.

Study and practice in aircraft nomenclature, materials, and structural design with preliminary exercises in joint making and gluing to develop workmanship and tolerances for airworthiness in accord with C.A.A. requirements. Coordinated with aircraft drafting, mechanics, flight, navigation and communication. Making parts and possibly gliders or cub planes with consideration for high school courses and club organization.
Sem. I, II.
Hansen Credit: 2

BUILDING CONSTRUCTION

Industrial Education 249 Bricklaying

Elements of bricklaying, including spreading of mortar, and the raising of corners and building walls in the various bonds, chimneys, piers, walling in frames, turning arches, building fireplaces. Preparation of instructional material; analysis of the trade for instructional units that may be used in industrial education. Demonstrations and class work carried on under actual trade practice.
Sem. I, II.
Ray Credit: 2

Industrial Education 251 Bricklaying

Prerequisite: Industrial Education 249 or its equivalent.

A continuation of Bricklaying 249 in advanced work, speed problems, motion study. Problems planned to involve units in the trade necessary for working under field conditions. Related work, drawing detail problems. Organization of instructional units for specific cases. Recommendations for outside jobs of good instructional value. Study of equipment, shop layouts, trade tests, scaffolding, safety and hygiene. Blueprints and outlines issued for reference in instructional planning.
Sem. I, II.
Ray Credit: 2

Industrial Education 354 Concrete Work

Basic elements of concrete work; mixtures, foundations and footings, sidewalks, curbs and gutters, fence and garden posts, flower pots, benches, sweep work, moulds, form work, terazza and inlay work. Ornamental concrete work suitable for high school unit and general shops. Outline of instructional units and phases of work emphasized in elementary work with blueprints of typical problems.
Sem. I, II.
Ray Credit: 2

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